

PERKIN-ELMER
Memory Products Division

SUPER SERIES
(SF AND ST)

MAGNETIC DISK DRIVE

OPERATION AND MAINTENANCE
VOLUME 2

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RECORD OF REVISIONS

Revision	Description	Date
A	Original issue of Volume 2 due to two-volume split of original single-volume manual.	6/79

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SECTION 1

LOGIC SCHEMATICS

1.1 INTRODUCTION

This volume contains all data essential to understand the logic functions of the SF and ST Disk Drives, as described in Volume 1. The information is presented in the following manner:

- Section 1 Logic Schematics
- Section 2 PWB Assembly Drawings
- Section 3 Master Spare Parts List

1.2 LOGIC DEFINITION AND SYMOLOGY

DTL and TTL logic of the typical inverting type (NAND – NOR rather than AND – OR) is used, though some AND – OR elements are employed. Although the same device may be used to implement both the NAND and the NOR function, the symbols shown on the logic schematics correspond to the particular functional operation.

In most cases, reference designations are not assigned to the system components. A grid coordinate system is used with the alphabetic coordinates progressing upward across the top of the circuit board from right to left (A in the upper right-hand corner). Numeric coordinates start at the bottom of the circuit board and advance upward. For example: a component having a grid coordinate of A1 will be found in the extreme lower right-hand corner of the board. These alphabetic and numeric reference points are etched on the board.

In the logic schematics, the input/output lines to each device are shown for the true (active) state of the function. A state indicator, shown as a small circle at the input or output of a device, signifies that, if that line is in the true state, it is at a 0-volt potential (low). Lack of a state indicator signifies that, if that line is in the true state, it is at +5 volts (high). An example of a logic symbol with definitions is shown below in Figure 1-1, the symbol depicts a logical NOR element which represents that output D is at +5 volts if either input A, B, or C is at 0-volt.

The numbers within the arrowheads indicate the source or destination of the related signal by logic schematic page number. An arrowhead placed adjacent to a signal line indicates a connection at that point.

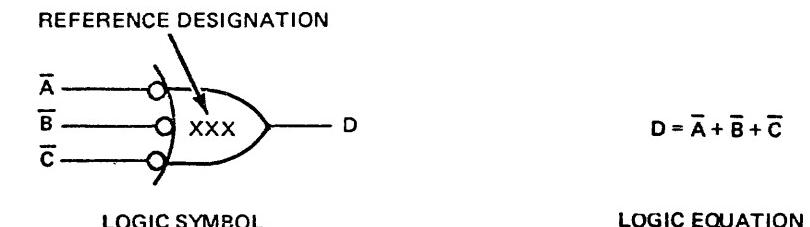


Figure 1-1. Logic Symbol Example

Table 1-1 lists and shows logic symbols used in this manual.

Table 1-1. Logic Symbols

Devices	Symbols	
836, 7414	 LOW IN HIGH OUT	 HIGH IN LOW OUT
846, 7400 858	 BOTH INPUTS HIGH OUTPUT LOW	 EITHER OR BOTH INPUTS LOW OUTPUT HIGH
7408, WIRED "OR"	 BOTH INPUTS HIGH OUTPUT HIGH	 EITHER OR BOTH INPUTS LOW OUTPUT LOW

Table 1-1. Logic Symbols (continued)

0619

Devices	Symbols	
7402		
	BOTH INPUTS LOW OUTPUT HIGH	EITHER OR BOTH INPUTS HIGH OUTPUT LOW
7418		
	BOTH INPUTS LOW OUTPUT LOW	EITHER OR BOTH INPUTS HIGH OUTPUT HIGH
844		
	ALL INPUTS HIGH OUTPUT LOW	ANY OR ALL INPUTS LOW OUTPUT HIGH
862		
	ALL INPUTS HIGH OUTPUT LOW	ANY OR ALL INPUTS LOW OUTPUT HIGH
		ONE-SHOT POSITIVE-GOING PULSE AT "1" OUTPUT NEGATIVE-GOING PULSE AT "0" OUTPUT INITIATED WHEN INPUT PULSE MAKES TRANSITION TO TRUE STATE

1.3 INTEGRATED CIRCUIT REFERENCE DATA

The following integrated circuit (IC) reference data is provided in part number sequence to assist experienced personnel in maintenance of the equipment. Each IC used in the SF and ST Disk Drives is defined by logic symbol, equation, and package configuration. Block diagrams, truth tables, and detailed descriptions are provided, as required. Reference data for all IC's used in SF and ST Disk Drives are provided.

1.4 LOGIC SCHEMATICS

The following listed logic schematics are provided:

Title	Dwg. No.
Line Terminator PWB	300095
Line Terminator PWB, D31/33 Female	301048
Line Terminator PWB, D31/33 Male	301056
I/O Connector, D31/33	301063
Line Terminator PWB, D40 Male	301075
Control Interface PWB	301175
Data Electronics PWB	301207
I/O Connector PWB	301292
Data Interface PWB (VFO)	301321
Power Supply	301361
MFM Data Control-2	301423
Detent Amplifier	301458
Servo Amplifier	301484
Disk Control PWB	301633
Electronics Interconnect PWB	301637
Servo Logic PWB	301688
H.I. Spindle Interconnection Diagram	301691
Spindle Switch PWB	301790
I/O PWB - D40	301937
I/O Connector With Interrupt Option	301948
Piggyback-I/O Connector With Interrupt Option	301953
Emergency Retract	302065

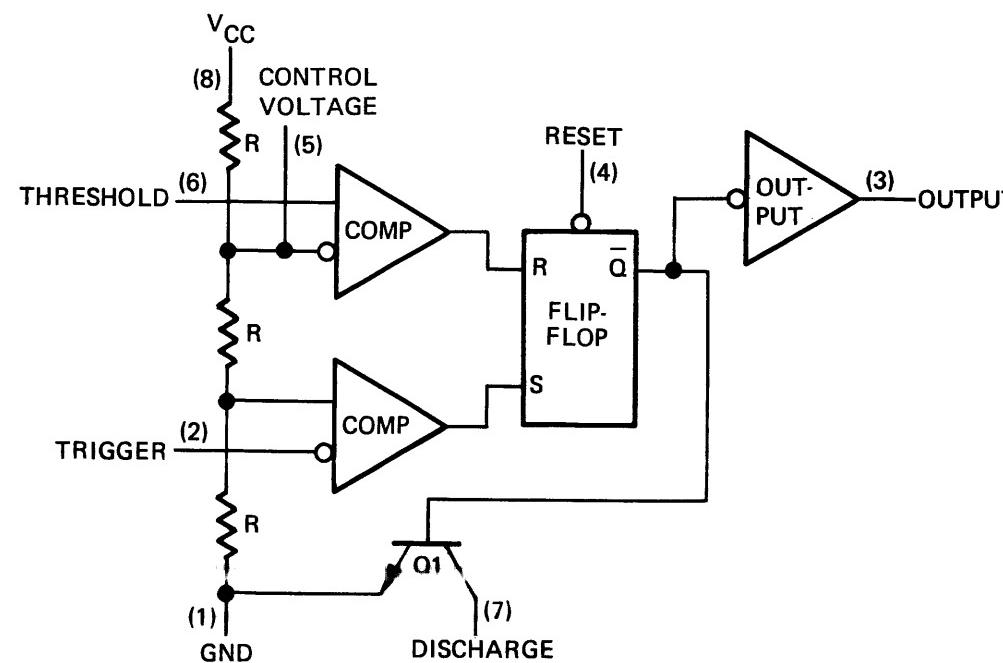
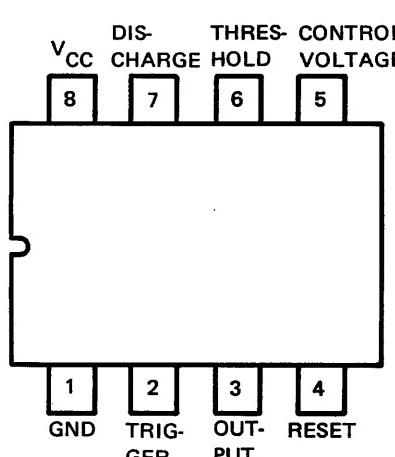
SN52555 (555)

Precision Timer

The SN52555 is a monolithic timing circuit capable of producing an accurate time delay or oscillation.

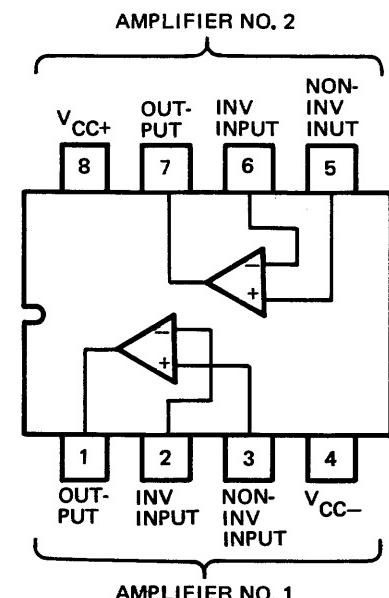
In the time-delay or monostable mode of operation, the timed interval is controlled by a single external resistor and capacitor network. In the astable mode of operation, the frequency and duty cycle may be independently controlled with two external resistors and a single external capacitor.

The threshold and trigger levels are normally two-thirds and one-third, respectively, of V_{CC} . These levels can be altered by use of the control voltage terminal. When the trigger input falls below the trigger level, the flip-flop is set and the output goes high. When the threshold input rises above the threshold level, the flip-flop is reset and the output goes low. The reset input can override all other inputs and can be used to initiate a new timing cycle. When the reset input goes low, the flip-flop is reset and the output goes low. When the output is low, a low-impedance path is provided between the discharge terminal and ground.



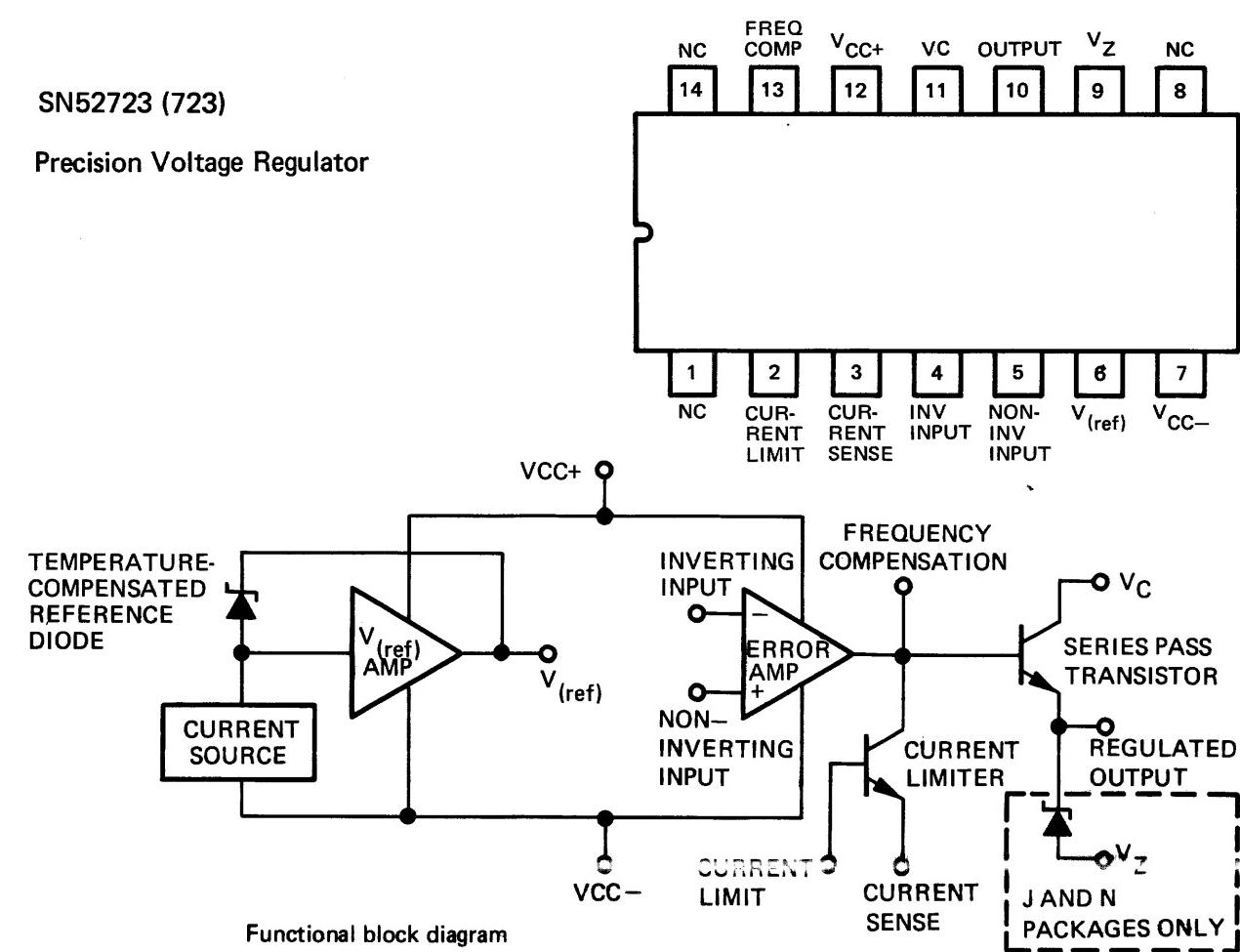
SN52558 (5558)

Dual General-Purpose Operational Amplifiers



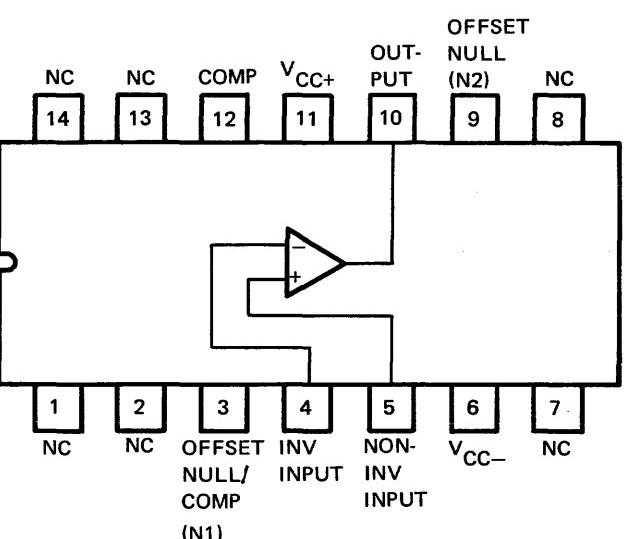
SN52723 (723)

Precision Voltage Regulator



SN72301 (LM301)

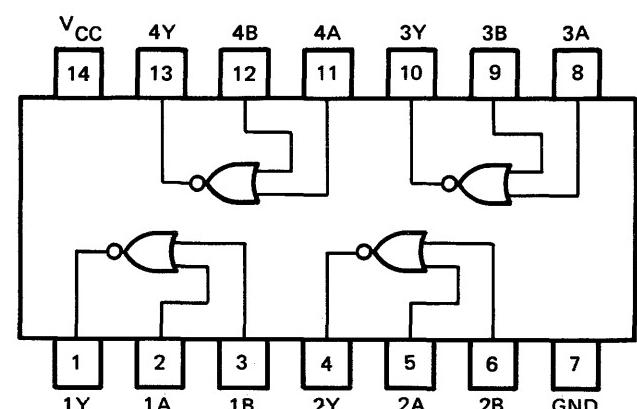
High Performance Operational Amplifier.



7402

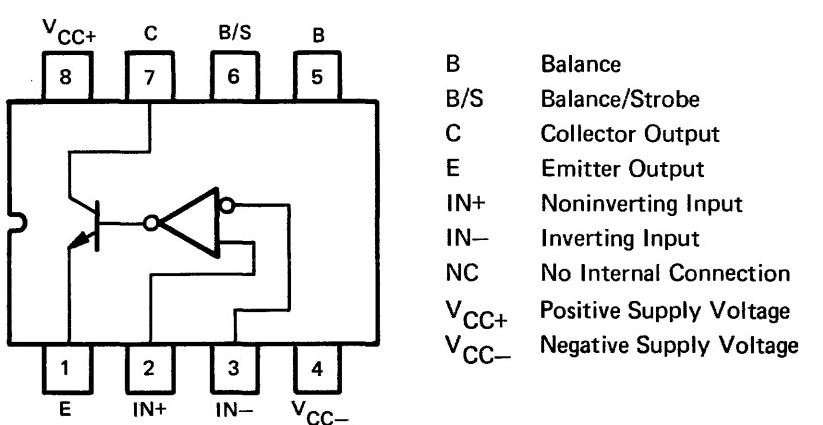
Quad 2-Input Positive-Nor Gates

$$\text{Positive Logic: } Y = \overline{A+B}$$



SN72311 (LM311)

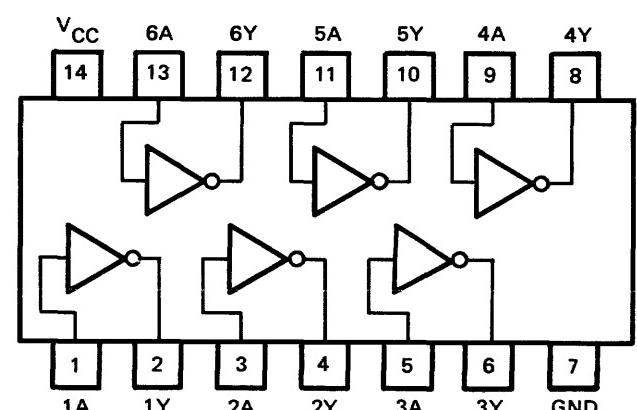
High-Speed Voltage Comparator



7404

Hex Inverters

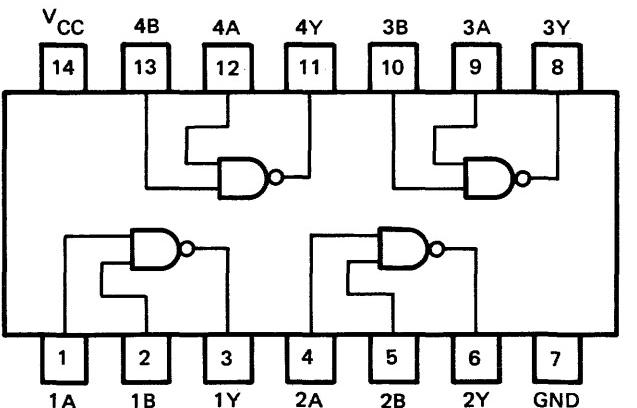
$$\text{Positive Logic: } Y = \overline{A}$$



7400

Quad 2-Input Positive-Nand Gates

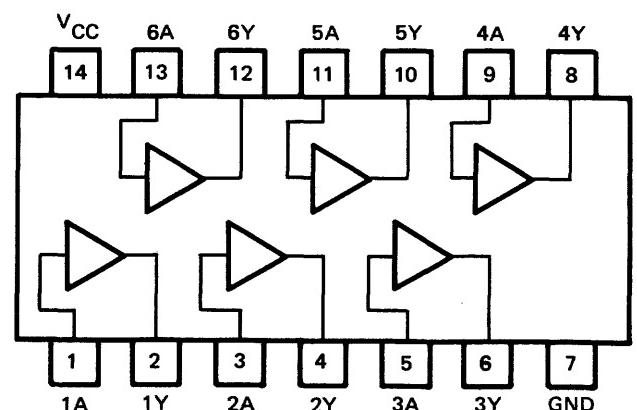
$$\text{Positive Logic: } Y = \overline{AB}$$



7407

Hex Buffers/Drivers With Open-Collector High-Voltage Outputs

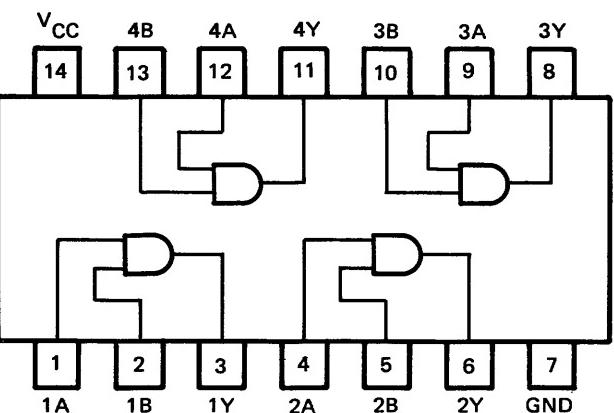
$$\text{Positive Logic: } Y = A$$



7408

Quad 2-Input Positive-And Gates

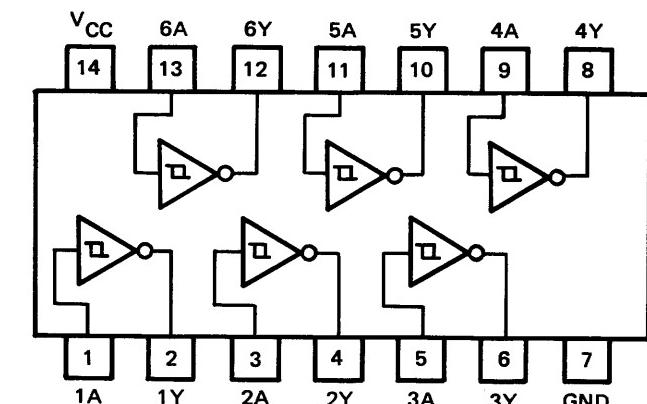
Positive Logic: $Y = AB$



7414

Hex Schmitt-Trigger Inverters

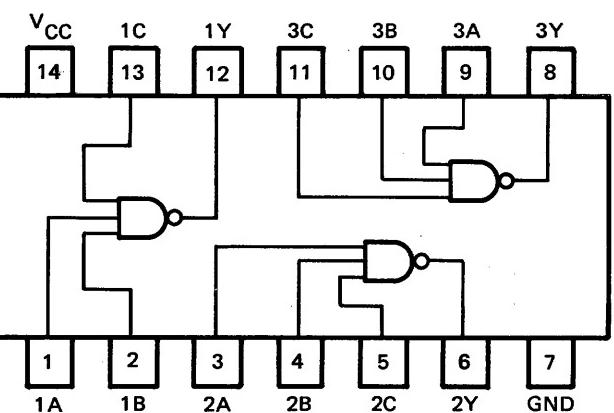
Positive Logic: $Y = \bar{A}$



7410

Triple 3 Input Positive-Nand Gates

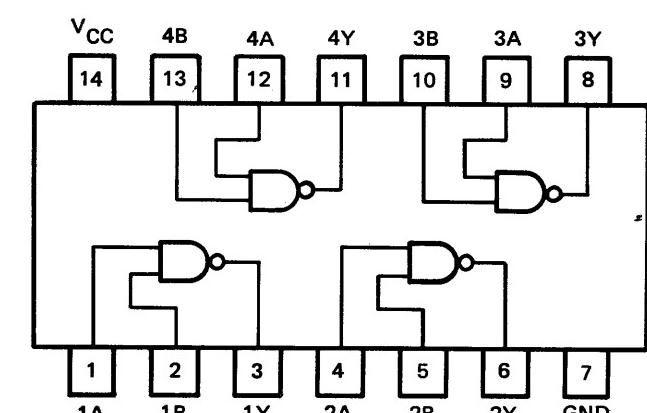
Positive Logic: $Y = \overline{ABC}$



7426

Quad 2-Input High-Voltage Interface Positive-Nand Gates

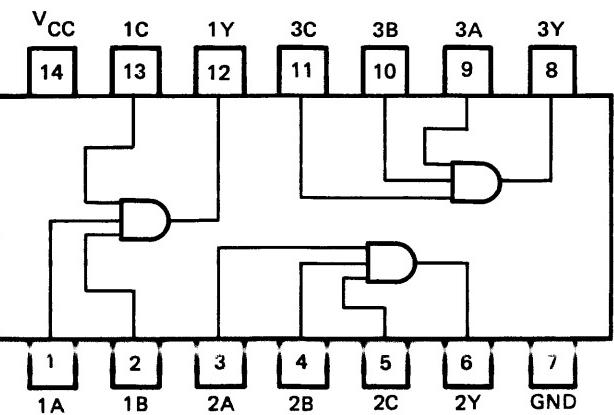
Positive Logic: $Y = \overline{AB}$



7411

Triple 3-Input Positive-And Gates

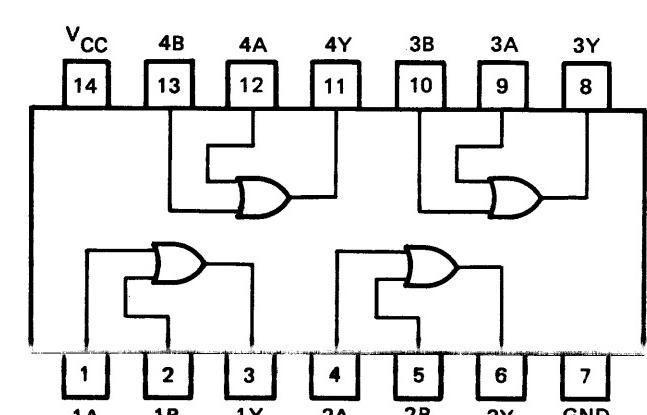
Positive Logic: $Y = ABC$



7432

Quad 2-Input Positive-Or Gates

Positive Logic: $Y = A+B$

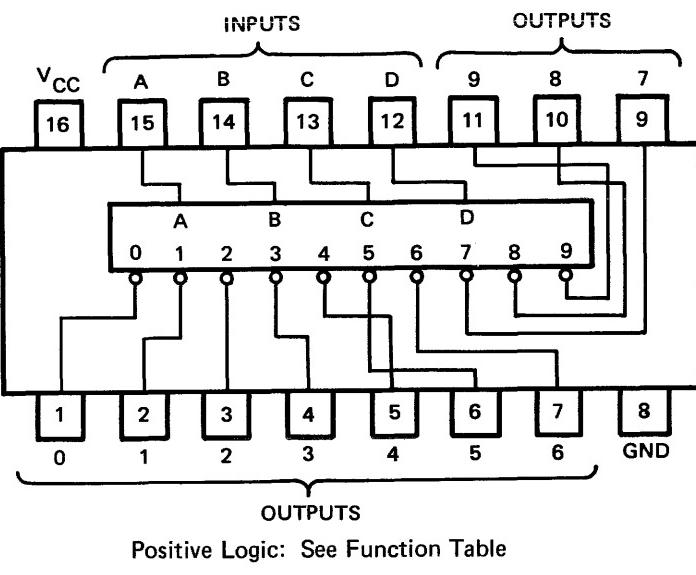


SN74LS42

4-Line-to-10-Line Decoder

(BCD-to-Decimal)

This monolithic decimal decoder consists of eight inverters and ten four-input NAND gates. The inverters are connected in pairs to make BCD input data available for decoding by the NAND gates. Full decoding of valid input logic ensures that all outputs remain off for all invalid input conditions.



All Outputs Are High for
Invalid Input Conditions
Positive Logic: See Function Table

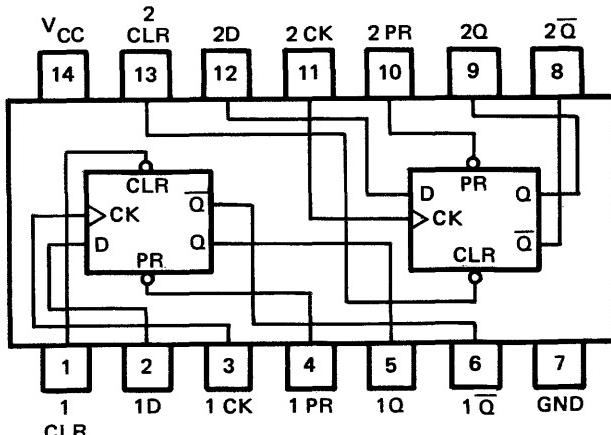
NO.	BCD INPUT				DECIMAL OUTPUT									
	D	C	B	A	0	1	2	3	4	5	6	7	8	9
0	L	L	L	L	L	H	H	H	H	H	H	H	H	H
1	L	L	L	H	H	L	H	H	H	H	H	H	H	H
2	L	L	H	L	H	H	L	H	H	H	H	H	H	H
3	L	L	H	H	H	H	H	L	H	H	H	H	H	H
4	L	H	L	L	H	H	H	H	L	H	H	H	H	H
5	L	H	L	H	H	H	H	H	H	L	H	H	H	H
6	L	H	H	L	H	H	H	H	H	H	L	H	H	H
7	L	H	H	H	H	H	H	H	H	H	H	L	H	H
8	H	L	L	L	H	H	H	H	H	H	H	H	L	H
9	H	L	L	H	H	H	H	H	H	H	H	H	L	L

7474

Dual D-Type Positive-Edge-Triggered Flip-Flops with Preset and Clear

FUNCTION TABLE

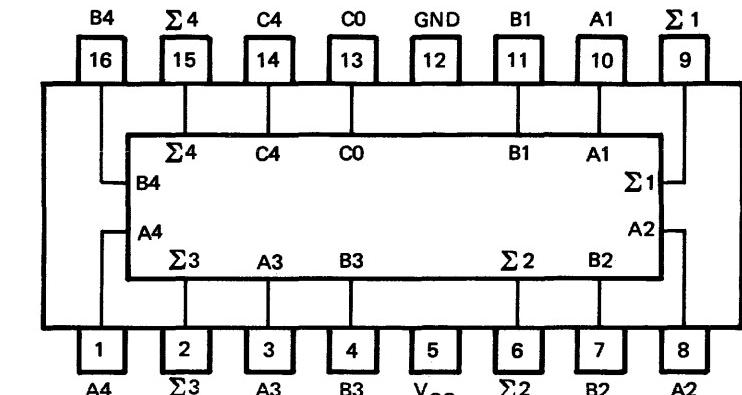
INPUTS				OUTPUTS	
PRESET	CLEAR	CLOCK	D	Q	\bar{Q}
L	H	X	X	H	L
H	L	X	X	L	H
L	L	X	X	H*	H*
H	H	↑	H	H	L
H	H	↑	L	L	H
H	H	L	X	Q_O	\bar{Q}_O



*This Condition is Non-Stable.

SN74LS83 (7483)

4-Bit Binary Full Adder



This full adder performs the addition of two 4-bit binary numbers. The sum (Σ) outputs are provided for each bit and the resultant carry (C_4) is obtained from the fourth bit. The adder is designed so that logic levels of the input and output, including the carry, are in their true form. Thus the end-around carry is accomplished without the need for level inversion. Designed for medium-to-high-speed, the circuits utilize high-speed, high-fan-out transistor-transistor logic (TTL) but are compatible with both DTL and TTL families.

INPUT				OUTPUT					
				WHEN CO = L	WHEN CO = H	WHEN C2 = L	WHEN C2 = H		
A1 A3	B1 B3	A2 A4	B2 B4	Σ_1 Σ_3	Σ_2 Σ_4	C2 C4	Σ_1 Σ_3	Σ_2 Σ_4	C2 C4
L	L	L	L	L	L	L	H	L	L
H	L	L	L	H	L	L	L	H	L
L	H	L	L	L	H	L	L	H	L
H	H	L	L	L	H	H	L	H	L
L	L	H	L	L	H	L	L	H	H
H	L	H	L	H	L	H	L	H	H
L	H	H	L	H	L	H	L	H	H
H	H	H	L	H	L	H	L	H	H

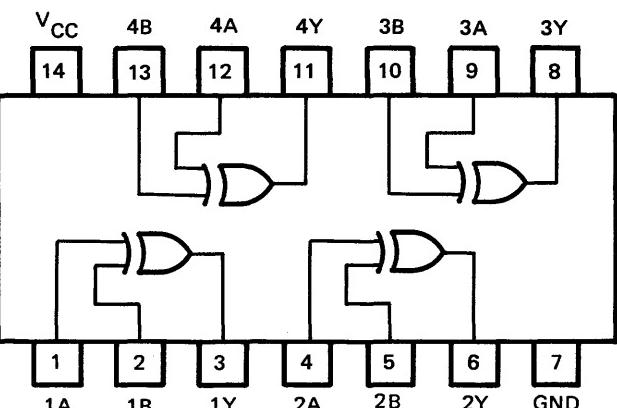
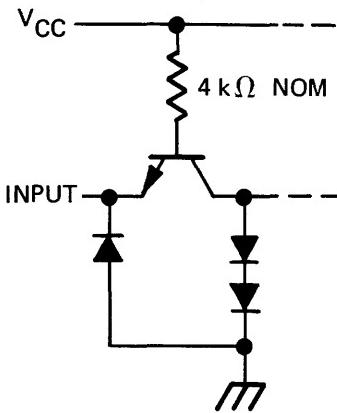
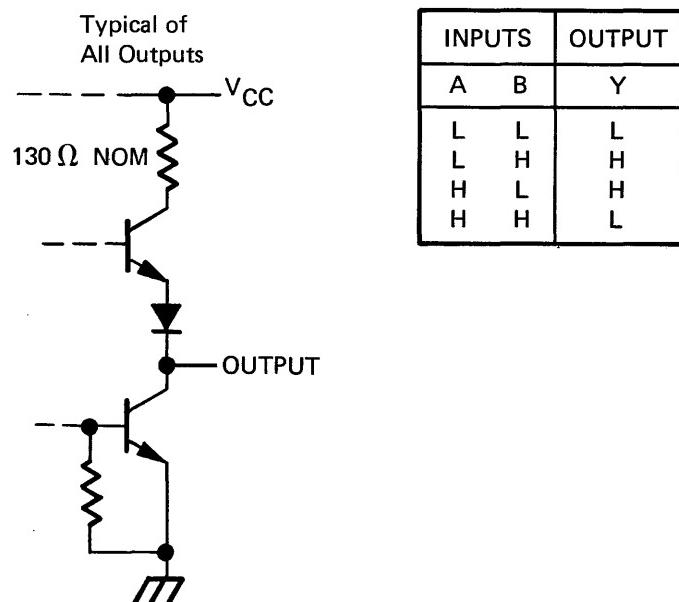
H = high level, L = low level

NOTE: Input conditions at A3, A2, B2, and C0 are used to determine outputs Σ_1 and Σ_2 and the value of the internal carry C2. The values at C2, A3, B3, A4, and B4 are then used to determine outputs Σ_3 , Σ_4 , and C4.

7486

Quad 2-Input Exclusive-OR Gates

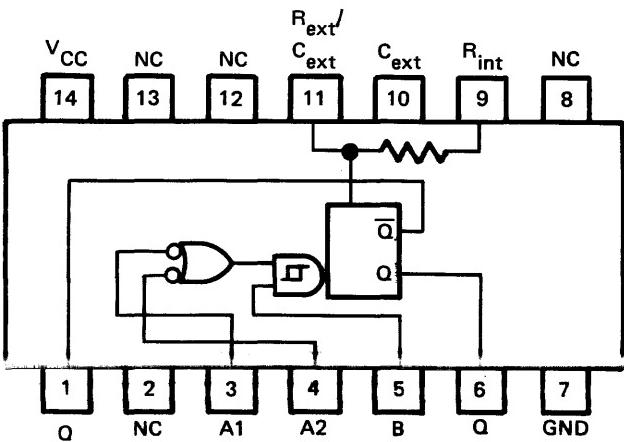
$$\text{Positive Logic: } Y = A \oplus B = \overline{AB} + AB$$

Equivalent of
Each InputTypical of
All Outputs**74121**

Monostable Multivibrators

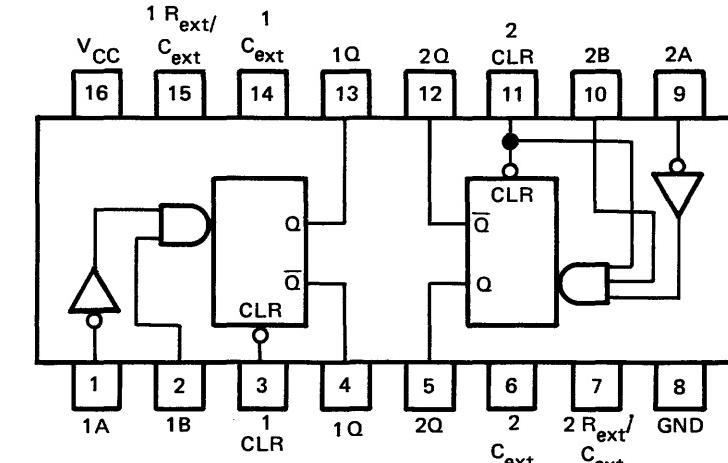
FUNCTION TABLE

INPUTS	OUTPUTS
A ₁ A ₂ B	Q \bar{Q}
L X H	L H
X L H	L H
X X L	L H
H H X	L H
H ↓ H	↑ L
↓ H H	↑ L
↓ ↓ H	↑ L
L X ↑	↑ L
X L ↑	↑ L

**74123**Dual Retriggerable Monostable
Multivibrators With Clear

FUNCTION TABLE

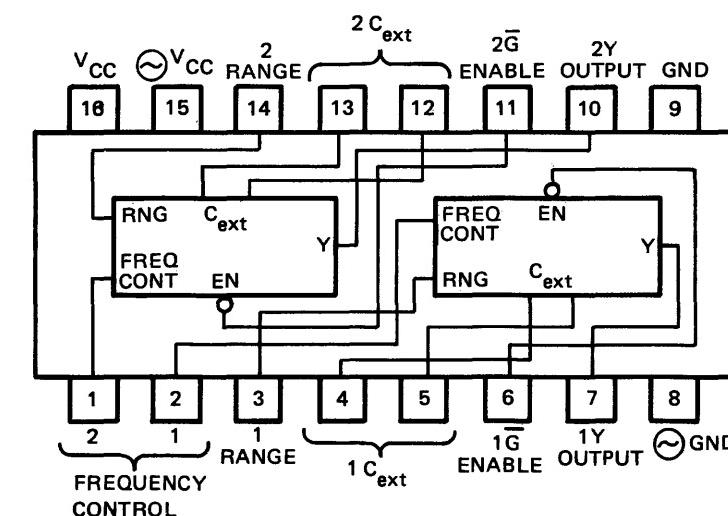
CLEAR	INPUTS		OUTPUTS	
	A	B	Q	\bar{Q}
L	X	X	L	H
X	H	X	L	H
X	X	L	L	H
H	L	↑	↑	↑
H	↓	H	↑	↑
↑	L	H	↑	↑

**SN74S124 (4024)**

Dual Voltage-Controlled Oscillators

Positive Logic:

While the enable input is low, the output is enabled. While the enable input is high, the output is high.



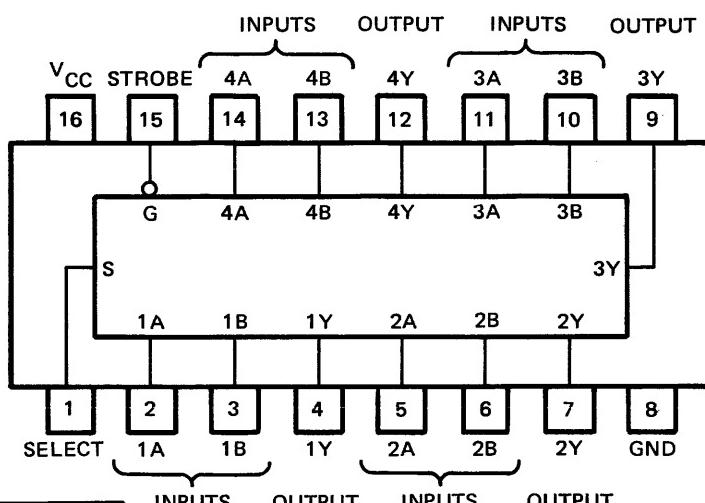
SN54LS157

Quad 2 line-to-1 line
Data Selector/Multiplexer

Positive Logic:

Low level at S selects A inputs

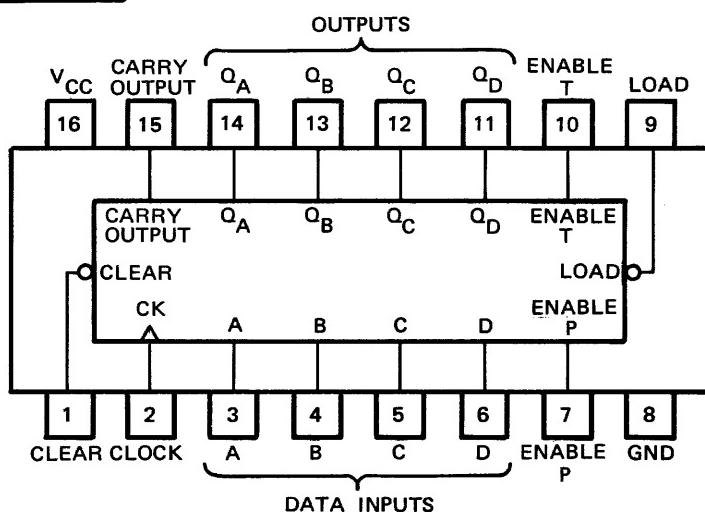
High level at S selects B input inputs



INPUTS			OUTPUT Y	
STROBE	SELECT	A B	'157, 'L157, 'LS157, 'S157	'LS158 'S158
H	X	X X	L	H
L	L	L X	L	H
L	L	H X	H	L
L	H	X L	L	H
L	H	X H	H	L

SN74161

Synchronous 4-Bit Binary Counter



This synchronous, presetable counter features an internal carry look-ahead for application in high-speed counting schemes. The '161 is a 4-bit binary counter. Synchronous operation is provided by having all flip-flops clocked simultaneously so that the outputs change coincident with each other when so instructed by the count-enable inputs and internal gating. This mode of operation eliminates the output counting spikes which are normally associated with asynchronous (ripple clock) counters. A buffered clock input triggers the four J-K master-slave flip-flops on the rising (positive-going) edge of the clock input waveform.

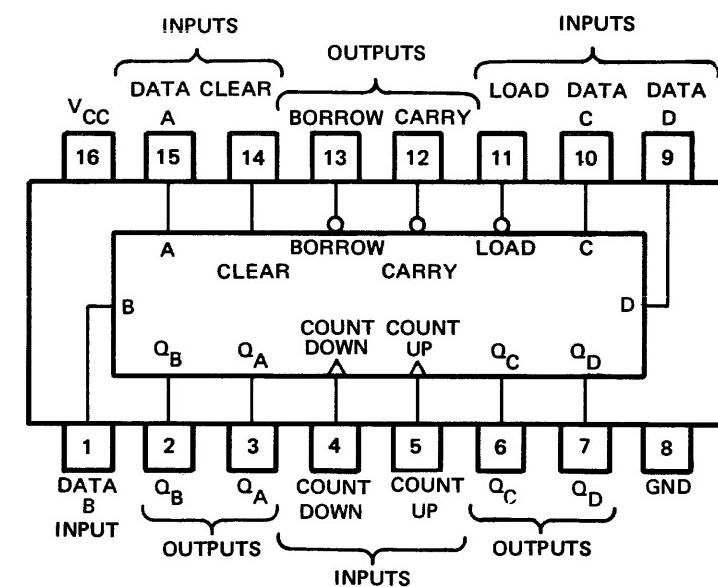
This counter is fully programmable; that is, the outputs may be preset to either level. As presetting is synchronous, setting up a low level at the load input disables the counter and causes the outputs to agree with the setup data after the next clock pulse regardless of the levels of the enable inputs. Low-to-high transitions at the load input should be avoided when the clock is low if the enable inputs are high at or before the transition. The clear function of the '161 is asynchronous and a low level at the clear input sets all four of the flip-flop outputs low regardless of the levels of the clock, load, or enable inputs.

The carry look-ahead circuitry provides for cascading counters for n-bit synchronous applications without additional gating. Instrumental in accomplishing this function are two count-enable inputs and a carry output. Both count-enable inputs (P and T) must be high to count, and input T is fed forward to enable the carry output. The carry output thus enabled will produce a positive output pulse with a duration approximately equal to the positive portion of the Q_A output. This positive overflow carry pulse can be used to enable successive cascaded stages. High-to-low-level transitions at the enable P or T inputs should occur only when the clock input is high.

SN74192 (9360) (BCD Counter)
SN74193 (9366) (Binary Counter)

Synchronous 4-Bit Up/Down Counters

Logic: Low input to load sets Q_A = A
Q_B = B, Q_C = C, and Q_D = D



Synchronous operation is provided by having all flip-flops clocked simultaneously so that the outputs change coincidently with each other when so instructed by the steering logic. This mode of operation eliminates the output counting spikes which are normally associated with asynchronous (ripple-clock) counters.

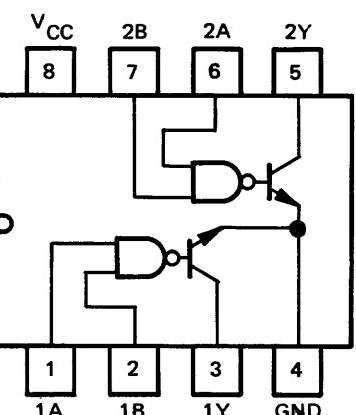
The outputs of the four master-slave flip-flops are triggered by a low-to-high-level transition of either count (clock) input. The direction of counting is determined by which count inputs is pulsed while the other count input is high.

All four counters are fully programmable; that is, each output may be preset to either level by entering the desired data at the data inputs while the load input is low. The output will change to agree with the data inputs independently of the count pulses. This feature allows the counters to be used as modulo-N dividers by simply modifying the count length with the preset inputs.

75451

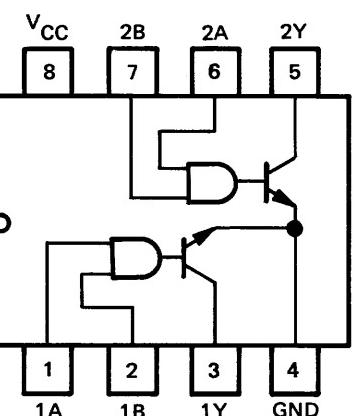
Dual Peripheral Positive -AND Driver

A	B	Y
L	L	L (on state)
L	H	L (on state)
H	L	L (on state)
H	H	H (off state)

**75452**

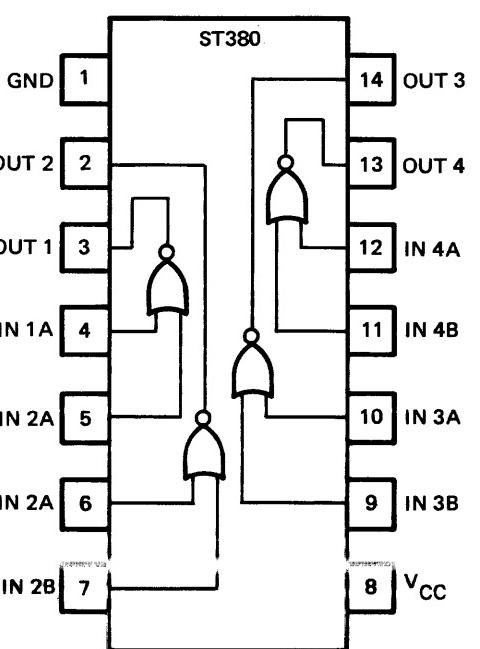
Dual Peripheral Positive -NAND Driver

A	B	Y
L	L	H (off state)
L	H	H (off state)
H	L	H (off state)
H	H	L (on state)

**8T380**

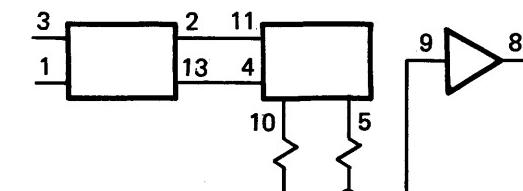
Quad 2-Input Bus Receiver

The 8T380 is a quad 2-input bus receiver with hysteresis for use in I/O, data, and memory busses. Built in hysteresis provides maximum noise immunity and a power-up or power-down sequence on the receiver will not affect the bus. Low input current allows several drivers and receivers to communicate over a common bus in "Party Line" fashion. The receiver has been designed to be pin-compatible with the Signetics Utilogic II SP 380 gate and provides increased noise immunity as well as lower input current. The 8T380 is ideal as a Schmitt Trigger in analog interfaces that cannot tolerate the non-linear input impedance characteristics of standard TTL. Further, the low input requirements allow the 8T380 to be used as a CMOS to TTL interface. All inputs have clamping diodes to simplify systems design.

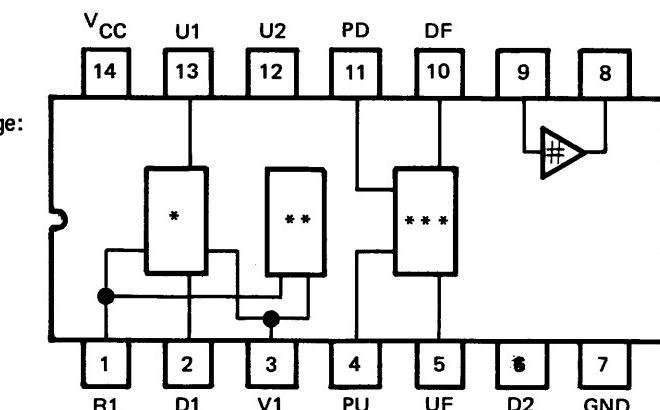
**4044**

Phase-Frequency Detector

Symbol:



Package:



* Phase Frequency Detector 1
 ** Phase Frequency Detector 2
 *** Charge Pump #Amplifier

Description:

This device contains two digital phase detectors and a charge pump circuit which converts MTTL inputs to a dc voltage level for use in frequency discrimination and phase-locked loop applications.

The two phase detectors have common inputs. Phase-frequency detector 1 is locked in (indicated by both outputs high) when the negative transitions of the variable input (V1) and reference input (R1) are equal in frequency and phase. If the variable input is lower in frequency or lags in phase, the U1 (up) goes low; conversely the D1 (down) output goes low when the variable input is higher in frequency or leads the reference input in phase. It is important to note that the duty cycles of the variable input and the reference input are not important since negative transitions control system operation.

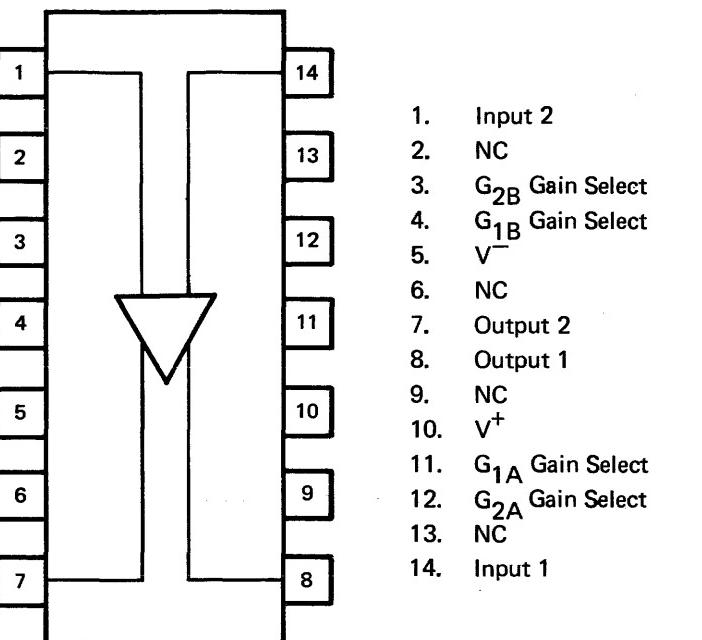
Phase detector 2 is locked when the variable input phase lags the reference phase by 90° (indicated by the U2 and D2 outputs alternately going low with equal pulse widths). If the variable input phase lags by more than 90° , U2 will remain low longer than D2, and conversely, if the variable input phase lags the reference phase by less than 90° , D2 remains low longer. In this phase detector the variable input and the reference must have 50% duty cycles.

The charge pump accepts the phase detector outputs (U1 or U2 applied to PU and D1 or D2 applied to PD) and converts them to fixed amplitude positive and negative pulses at the UF and DF outputs respectively. These pulses are applied to a lag-lead active filter, which incorporates external components, as well as the amplifier provided in the MC4344/4044 circuit. The filter provides a dc voltage proportional to the phase error.

Video Amplifier

The SE/NE 592 is a monolithic, two stage, differential output, wideband video amplifier. It offers fixed gains of 100 and 400 without external components and adjustable gains from 400 to 0 with one external resistor. The input stage has been designed so that with the addition of a few external reactive elements between the gain select terminals, the circuit can function as a high pass, low pass, or band pass filter. This feature makes the circuit ideal for use as a video or pulse amplifier in communications, magnetic memories, display and video recorder systems. The 592

is a pin-for-pin replacement for the μ A733.



9602

Multivibrator

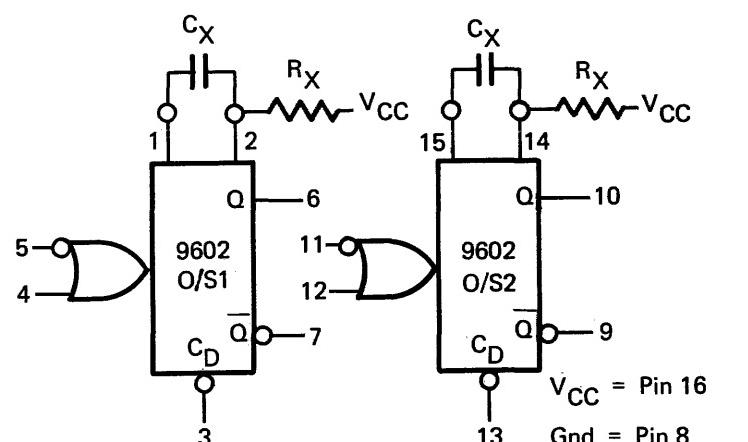
9602 is DC level sensitive retriggerable monostable multivibrators which provides an output pulse whose duration and accuracy is a function of external timing components.

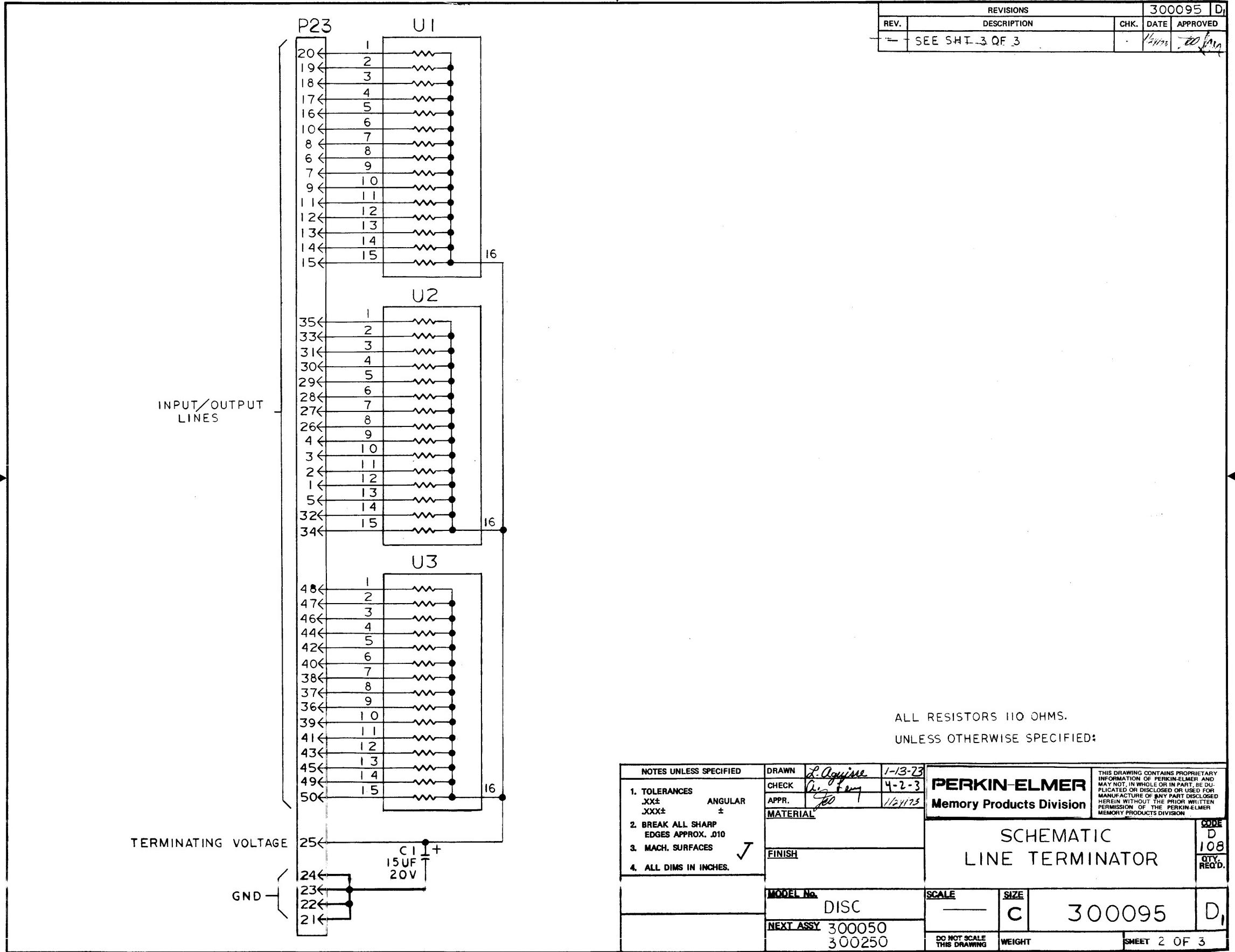
The inputs are D.C. coupled making triggering independent of input transition times. If the input signal is applied to an active high input, triggering will occur on the rising edge of the waveform. By applying the input signal to an active low input, triggering will occur on the falling edge of the waveform.

The input conditions to be satisfied for triggering are indicated by the external logic symbols.

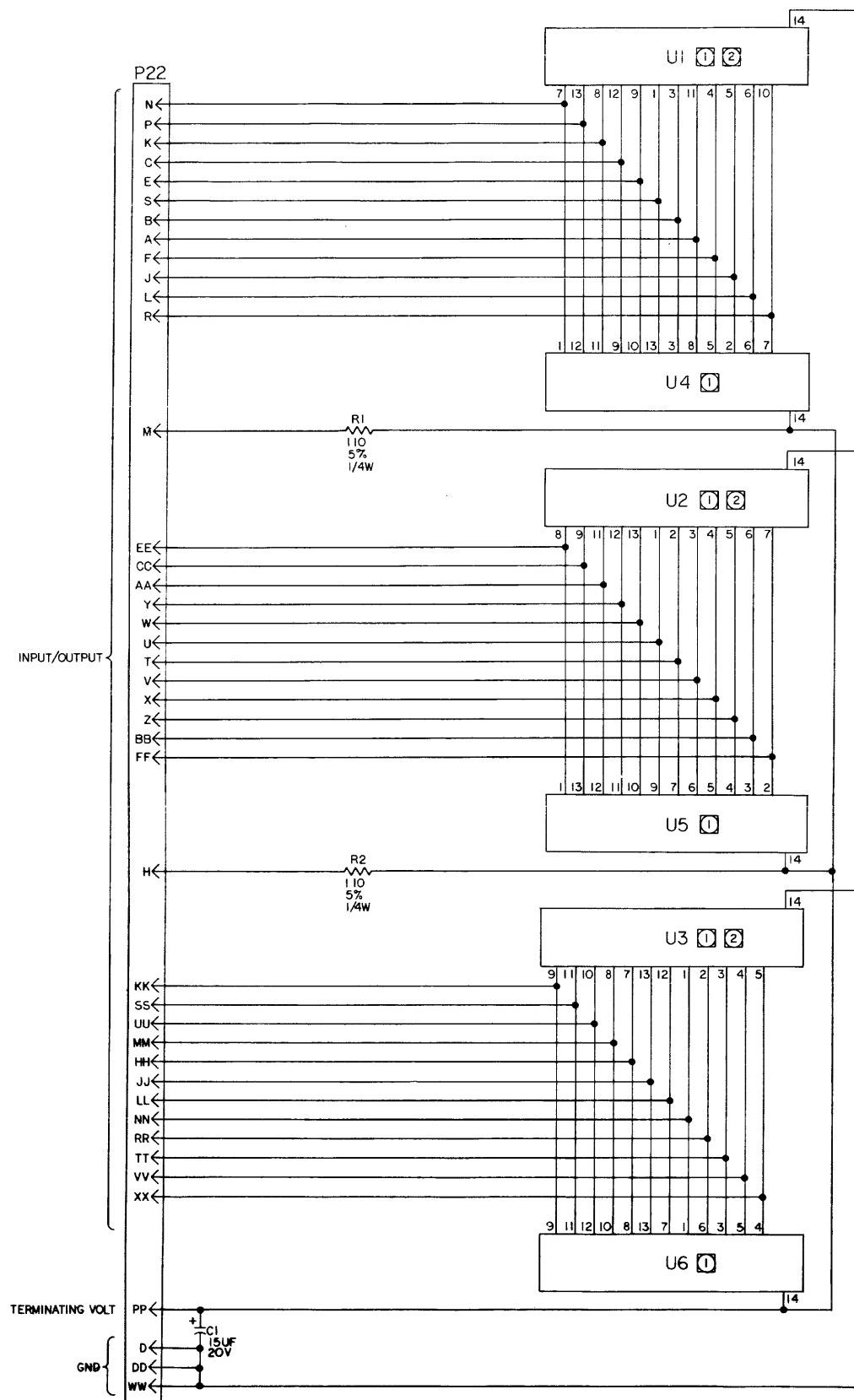
Each time the input conditions for triggering are met, the external capacitor is discharged and a new cycle is started. Successive inputs with a period shorter than the delay time retrigger the monostable resulting in a continuous true output. Retriggering may be inhibited by tying the negation (\bar{Q}) output back to an active level low input.

9602 has an active low reset input (\overline{CD}) which allows the one shot to be reset.



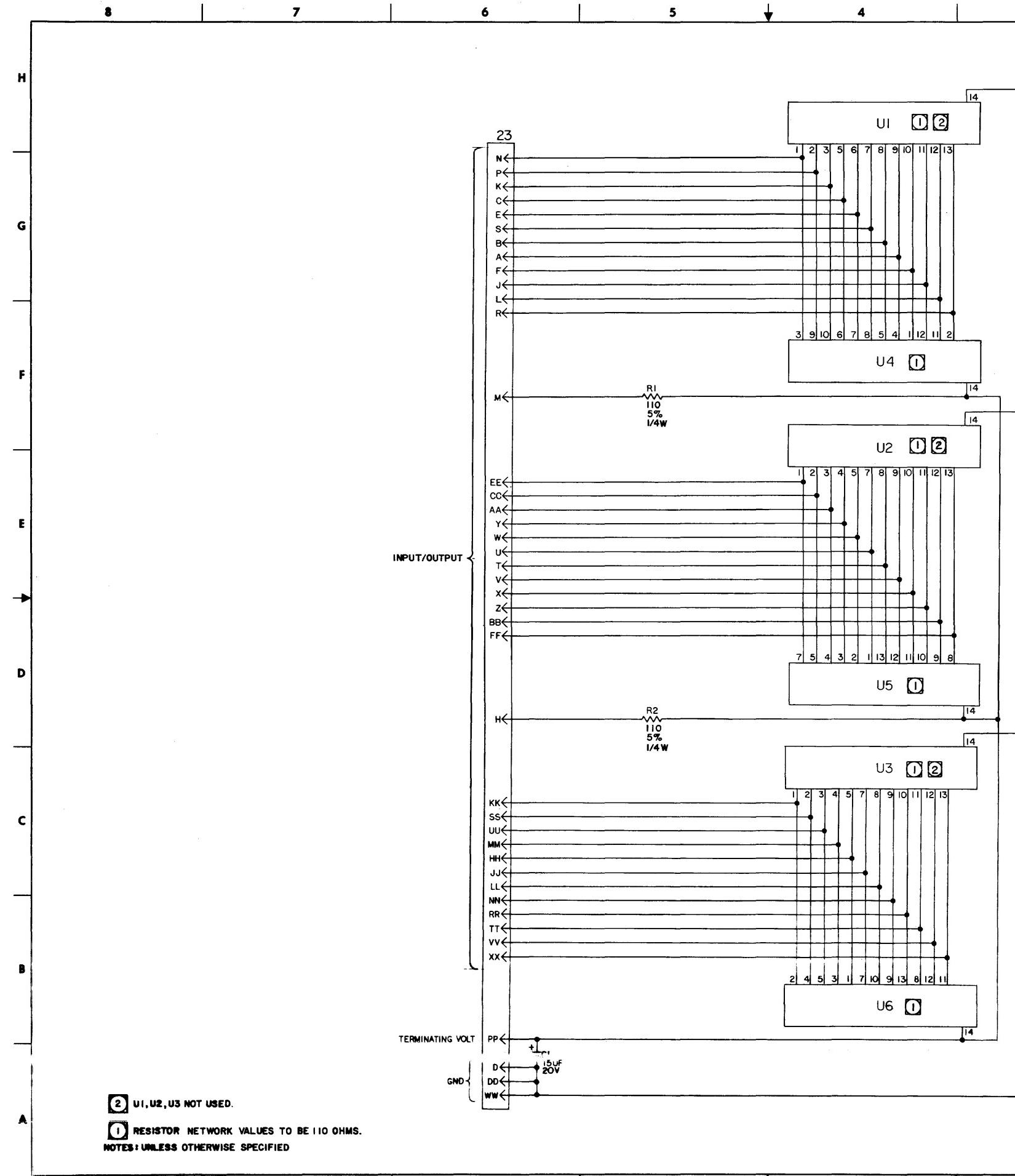


8



U1,U2,U3 NOT USED
 RESISTOR NETWORK VALUES TO BE 110 OHMS.
NOTES: UNLESS OTHERWISE SPECIFIED

REV. 301056 A
A PILOT RELEASE
A MFJ RECEIVE VIA CHANNEL



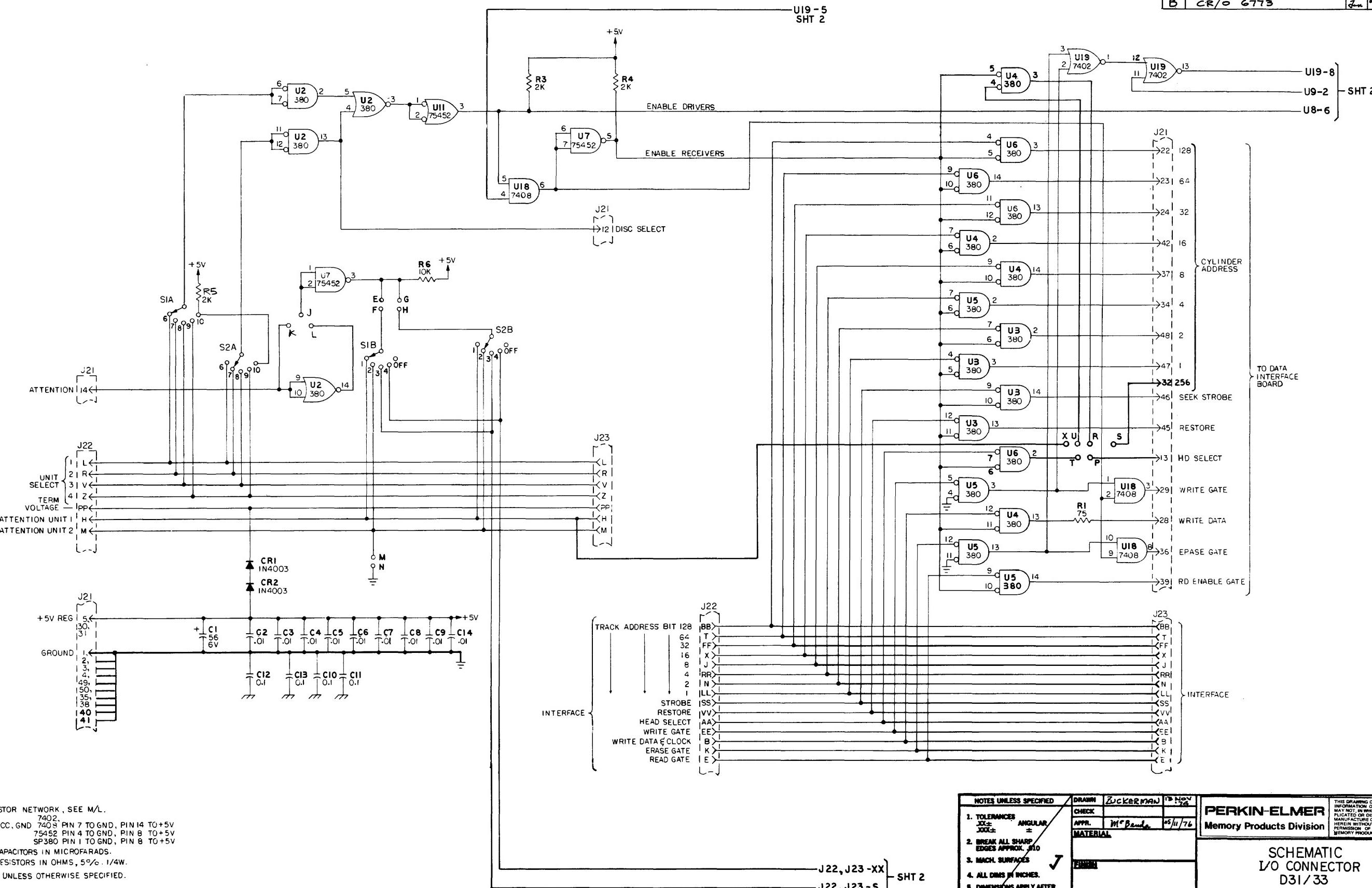
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IN THE DRAWING BY THE PERKIN-ELMER
CORPORATION.

NOTES UNLESS SPECIFIED	DRWNS	1/25/74
1. TOLERANCES	CHECK	
2. JIGS	APPL	
3. EQUIPMENT SHOWN	MATERIAL	
4. DESIGN APPROVED	PERF	
5. ENGR. SURFACES	PERF	
6. ALL DRWS IN INCHES	PERF	
DISC		SCALE
301055		SIZE
301056		D
301056		A
301056		1 OF 1

PERKIN-ELMER
Memory Products Division

SCHEMATIC -
LINE TERMINATOR, MALE
D31/33

REVISIONS	301063 B		
	CHK.	DATE	APPROVED
6773	Jan	05/18/11	M. Banda



④ RESISTOR NETWORK, SEE M/L.

3. I.C., VCC, GND 7402,
7408 PIN 7 TO GND, PIN 14 TO +5V
75452 PIN 4 TO GND, PIN 8 TO +5V
SP380 PIN 1 TO GND, PIN 8 TO +5V

3 ALL CAPACITORS IN MICROFARADS

1. ALL RESISTORS IN OHMS, 5%, 1/4W.

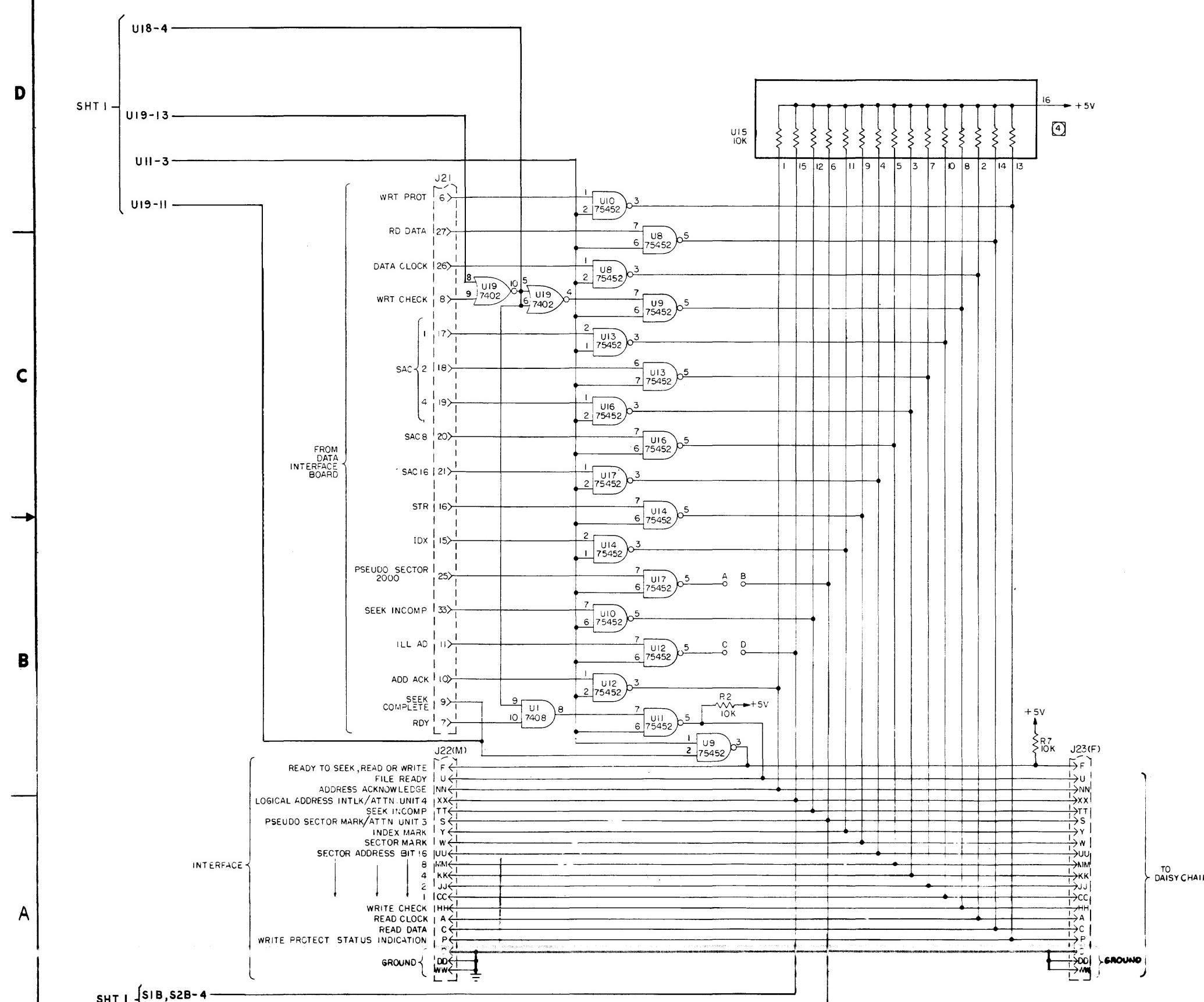
NOTE: UNLESS OTHERWISE SPECIFIED

NOTES: UNLESS OTHERWISE SPECIFIED.

NOTES UNLESS SPECIFIED		DRAWN	ZUCKERMAN	18 NOV 74	PERKIN-ELMER Memory Products Division			THIS DRAWING CONTAINS PROPRIETARY INFORMATION OF PERKIN-ELMER AND MAY NOT, IN WHOLE OR IN PART, BE DUPLICATED, REPRODUCED, OR USED IN THE MANUFACTURE OF ANY PART DESCRIBED HEREIN WITHOUT THE PRIOR WRITTEN PERMISSION OF THE PERKIN-ELMER MEMORY PRODUCTS DIVISION	
1. TOLERANCES <small>JOG±: ANGULAR JOG±: ±</small>	CHECK	APPR.	McBane 05/11/76						
MATERIAL									
J									
FINISH									
ALL DIMS IN INCHES.									
DIMENSIONS APPLY AFTER FINISH AND HEAT TREAT									
100 TPI				SCALE	SIZE	301063		D	
NEXT AMT				DO NOT SCALE THIS DRAWING		WEIGHT	SHEET 1 OF 2		
301062									

8 7 6 5 4 3 2 1

REV.		301063 B	
REV.	DESCRIPTION	CHK.	DATE APPROVED
SEE SHT 1			



DRAWN	ZUCKERMAN	REV.
CHECK		
APPR.		
MATERIAL		
PERKIN ELMER Memory Products Division		
SCHEMATIC I/O CONNECTOR D31/33		
100 TPI		
301064	D	301063
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8 7 6 5 4 3 2 1

D

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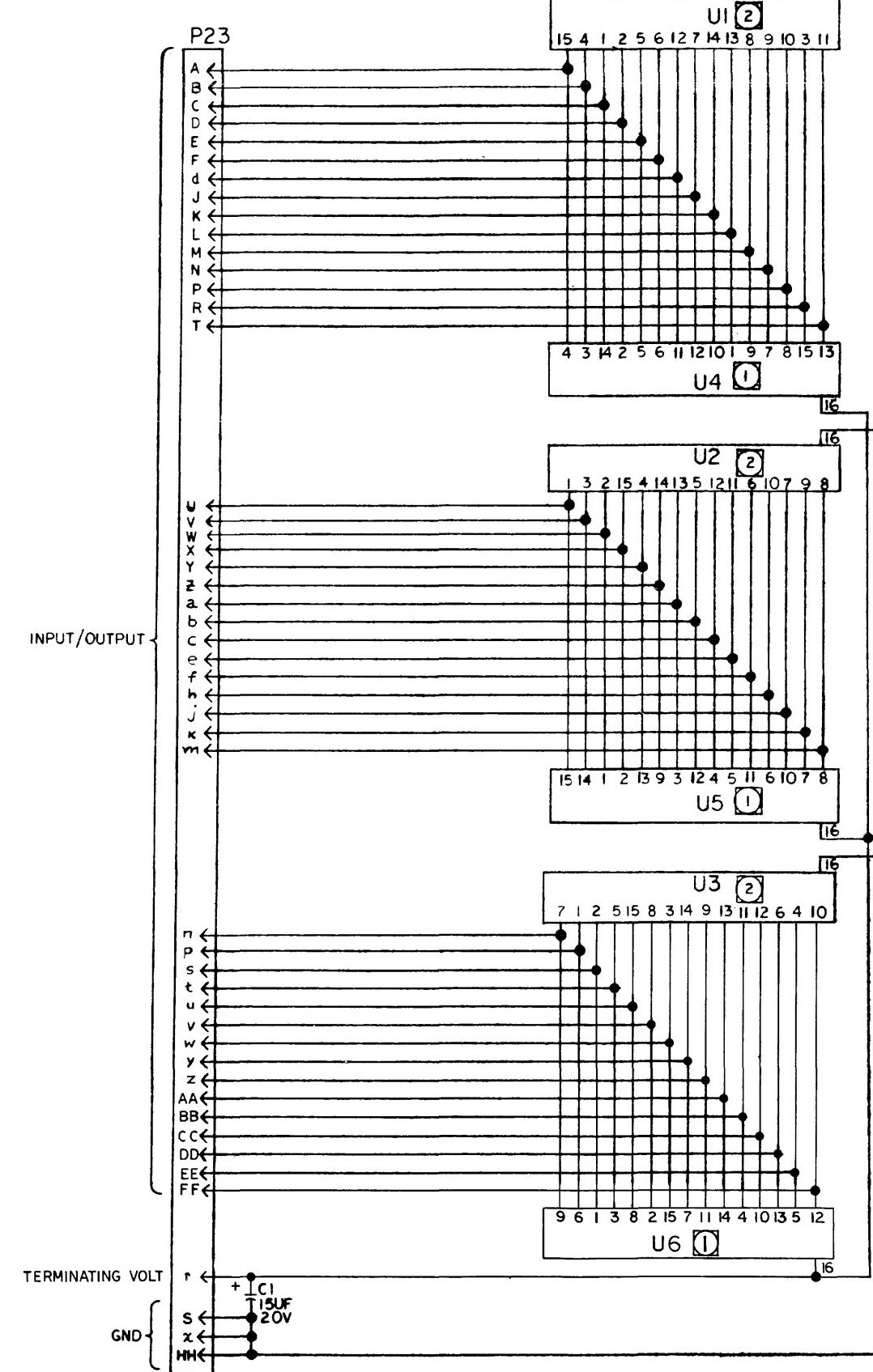
C

B

B

A

A



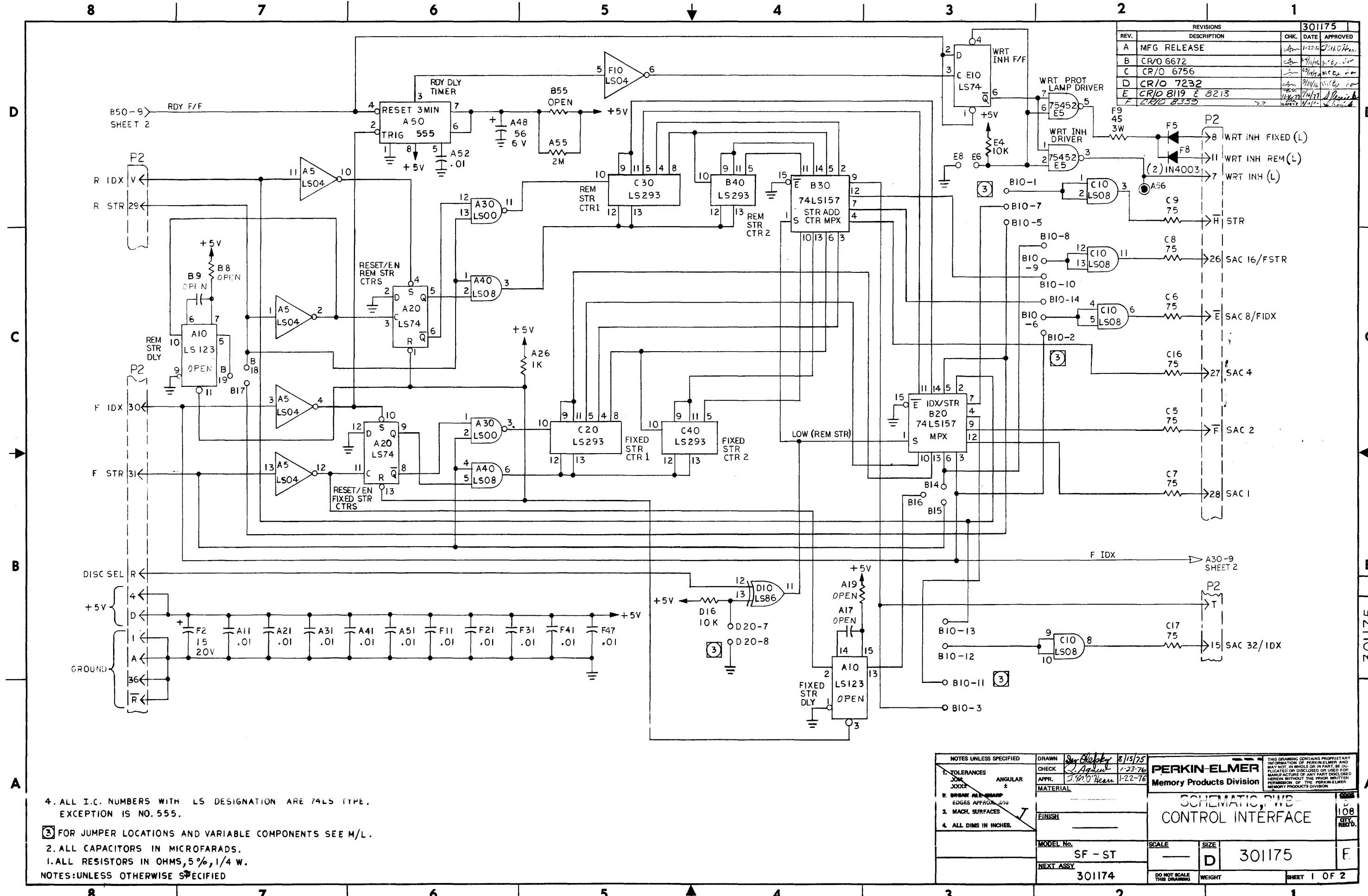
NOTES UNLESS SPECIFIED		DRAWN	R. O'Dwyer	4-22-75
1. TOLERANCES		CHECK	F.M. O'Hearn	5-1-75
JOC ₁ ANGULAR JOC ₂ ±		APPR.	1st	5-1-75
2. BREAK ALL SHARP EDGES APPROX. .010		MATERIAL		
3. MACH. SURFACES		FINISH		
4. ALL DIMS IN INCHES		MODEL NO.	100/200 TPI - F & T	
		PRINTED BY	301074	
		DO NOT SCALE THIS DRAWING		
		REVISIONS		
		REV.		
		DESCRIPTION		
		CHK.		
		DATE		
		APPROVED		

PERKIN-ELMER
Memory Products Division

SCHEMATIC, PWB
LINE TERMINATOR, MALE
D40

301075

B



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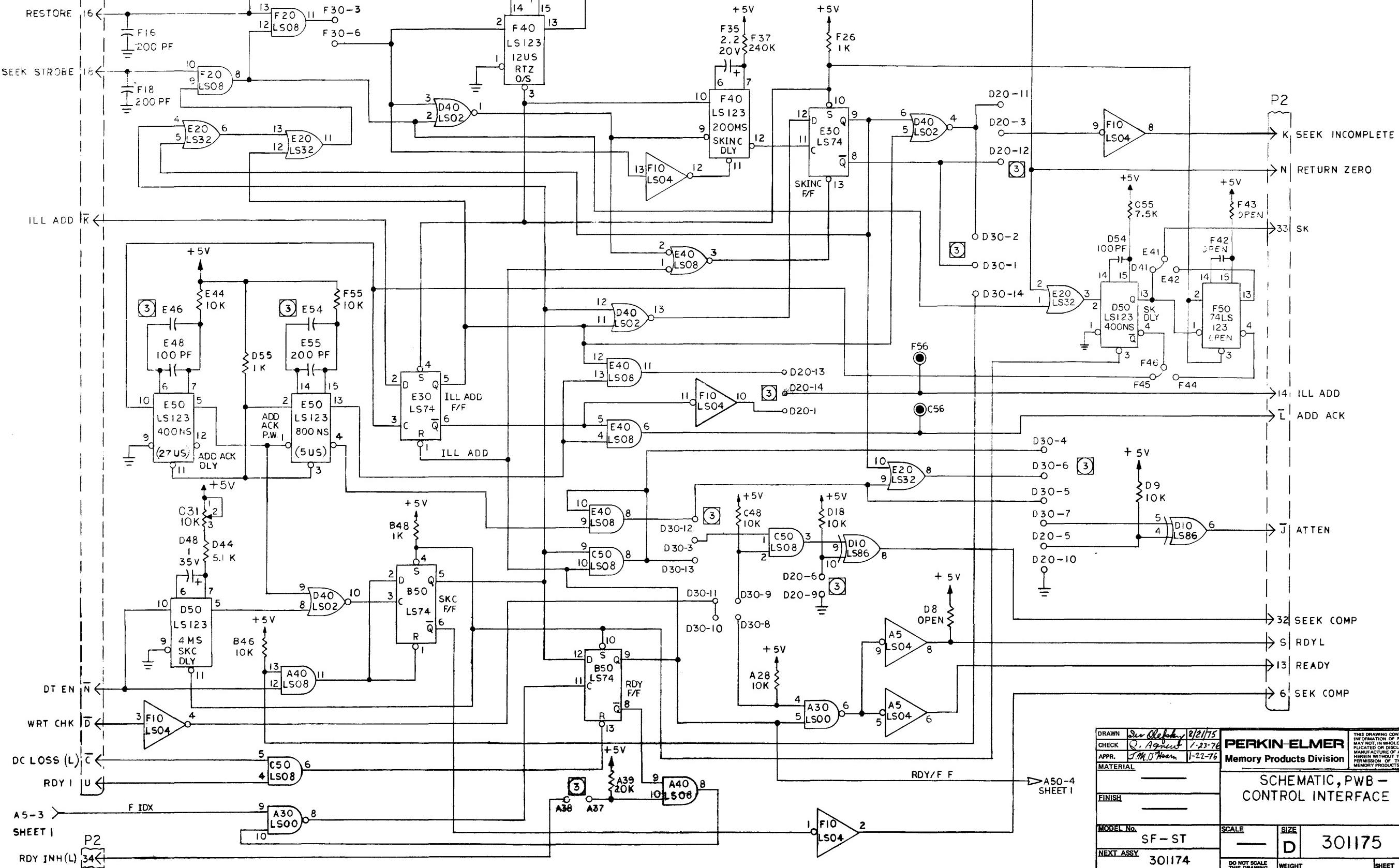
2

1

REV.		DESCRIPTION		CHK.	DATE	APPROVED
— SEE SHEET 1						

D

D



DRAWN	S. Olesky	8/21/75	PERKIN-ELMER	Memory Products Division
CHECK	R. Agent	1-23-76	THIS DRAWING CONTAINS PROPRIETARY INFORMATION WHICH MAY NOT, IN WHOLE OR IN PART, BE DUPLICATED OR DISCLOSED OR USED FOR OTHER THAN THE INTENDED PURPOSE. IT IS RESTRICTED FROM EXPORT OUTSIDE THE UNITED STATES OF AMERICA. THIS DRAWING IS THE PROPERTY OF PERKIN-ELMER CORPORATION AND IS TO BE RETURNED UPON REQUEST.	
APPR.	J.M.O'Hearn	1-22-76	301175	
MATERIAL	SCHEMATIC, PWB - CONTROL INTERFACE			CODE
FINISH				D 108
MODEL No.	SF-ST			QTY.
NEXT ASSY	301174			REQ'D.
DO NOT SCALE THIS DRAWING		SIZE		D 301175
		WEIGHT		F

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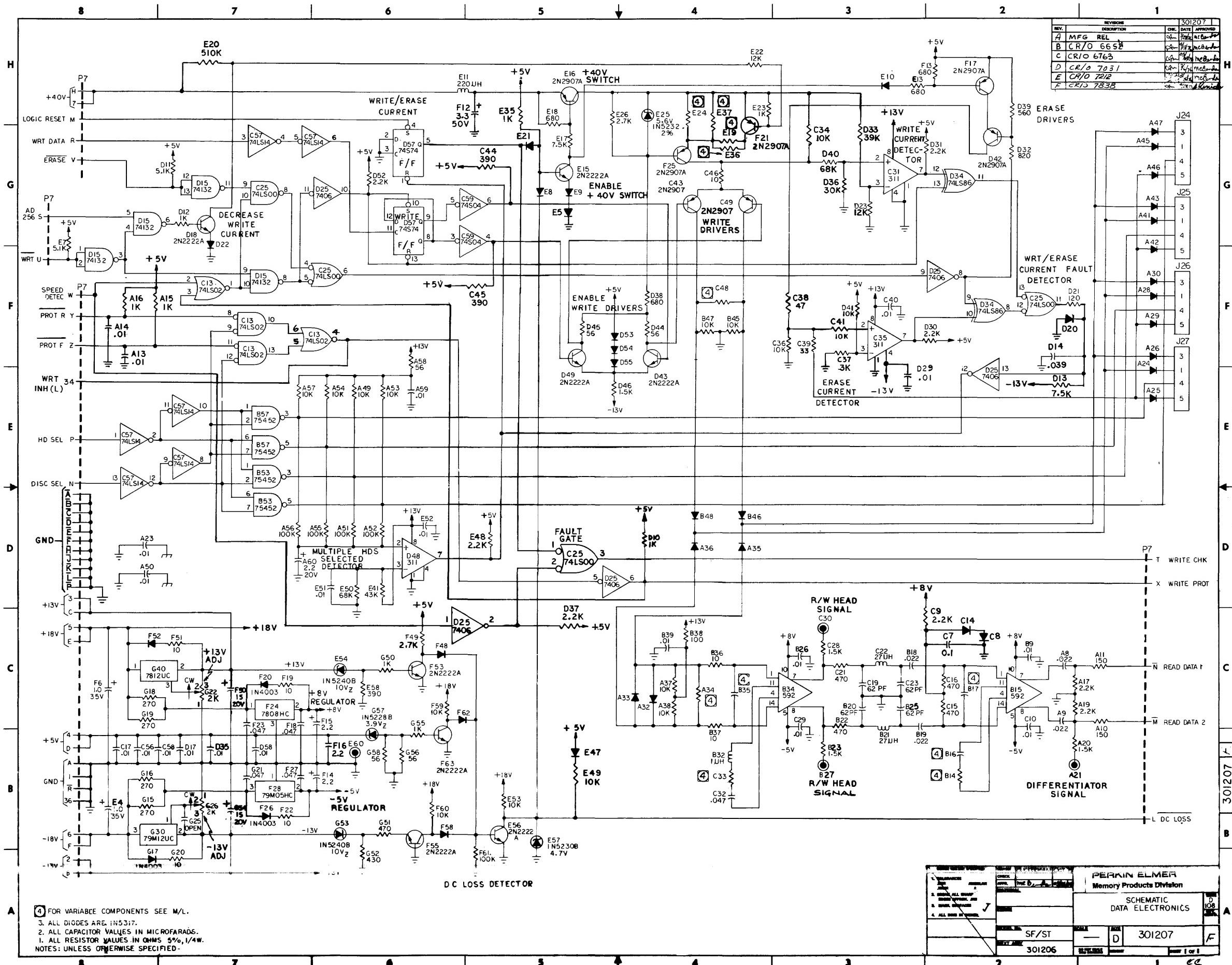
4

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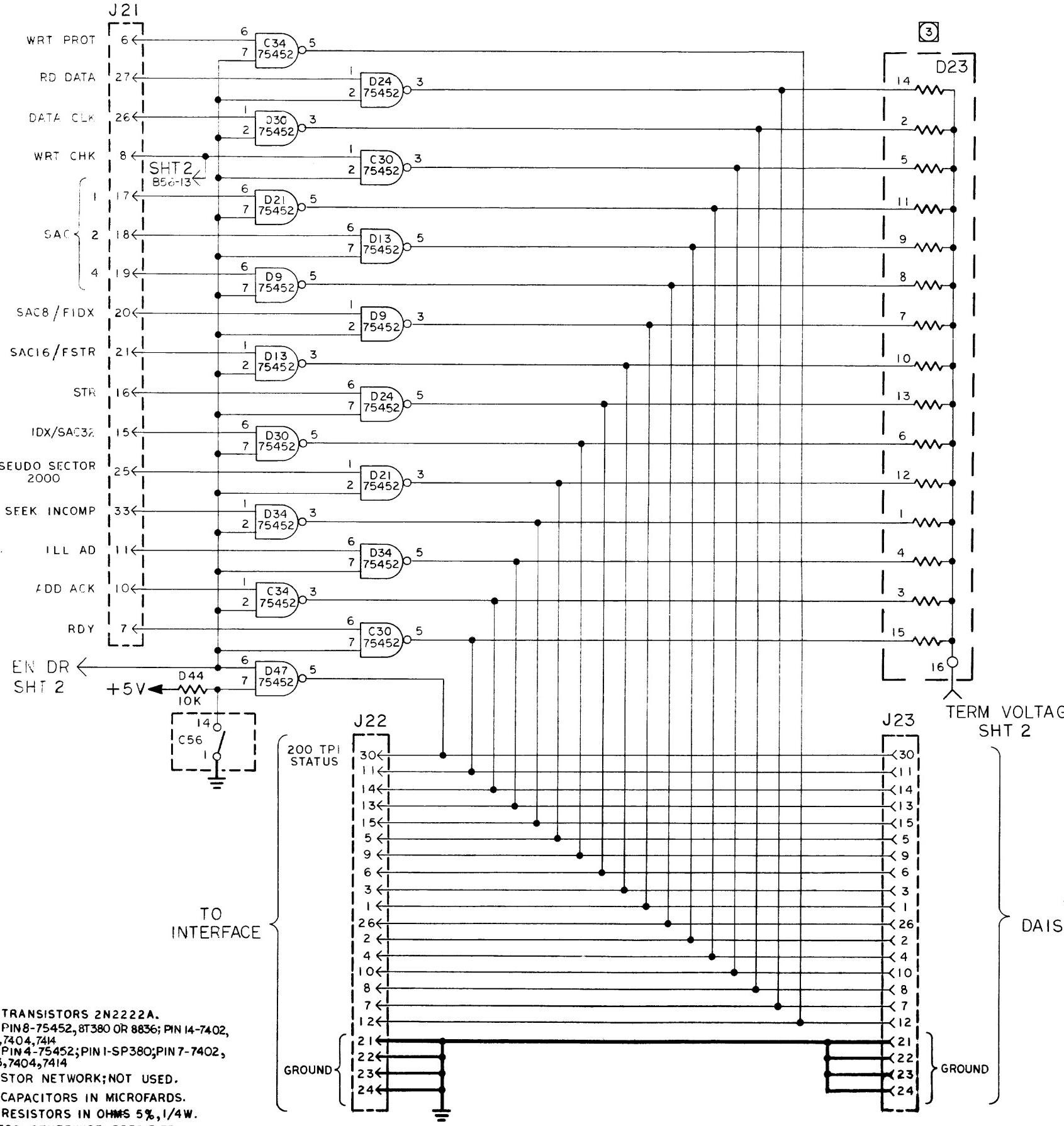
301175



8 7 6 5 4 3 2 1

D

D



REVISIONS			301292
REV.	DESCRIPTION	CHK.	DATE APPROVED
A	MFG RELEASE	Am	1-2-76 J. J. C...
A1	CR/O 7566	Am	1-2-76 M. B...
B	CR/O 9167	Am	1-2-76 J. J. C...

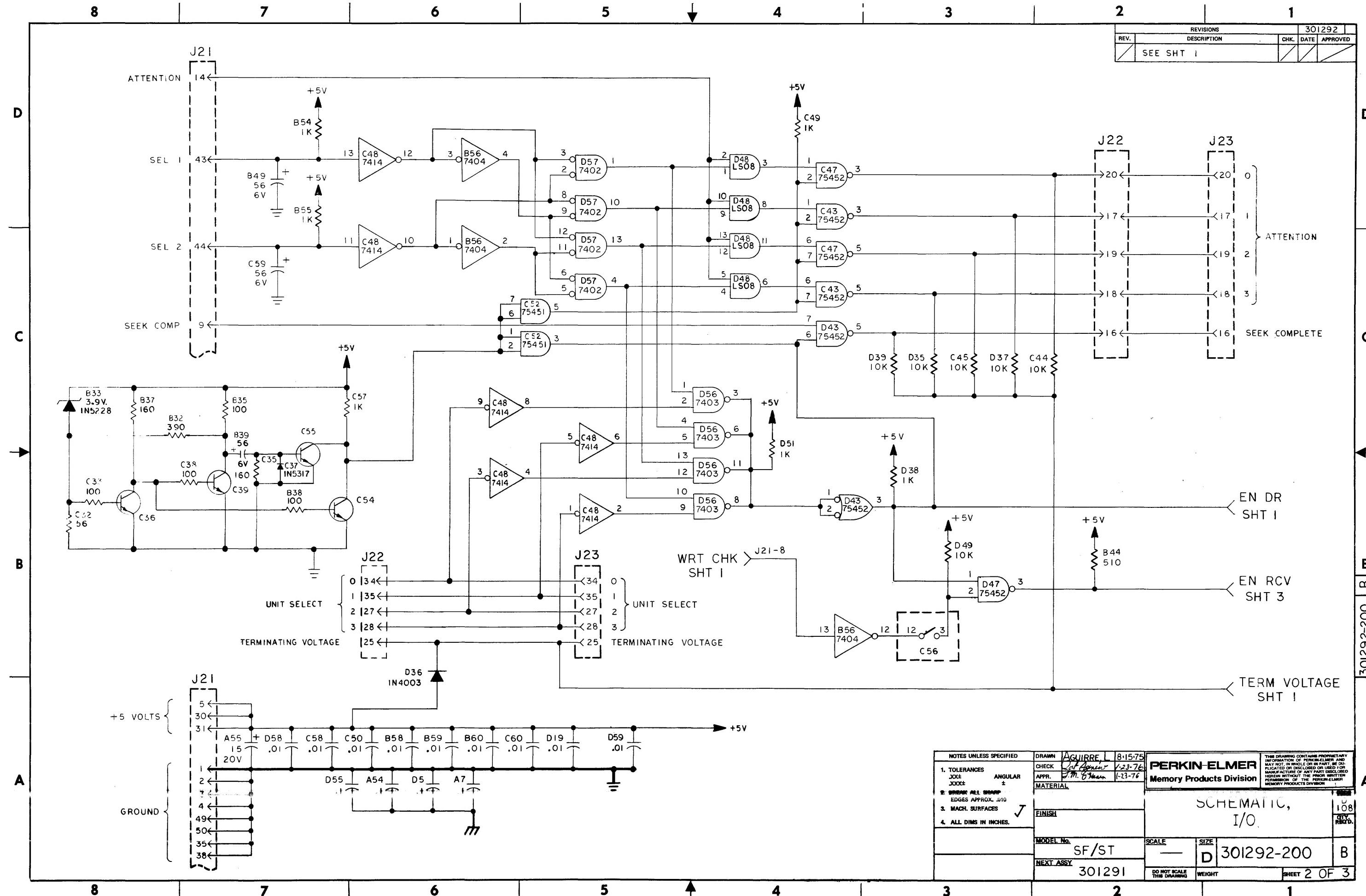
NOTES UNLESS SPECIFIED	DRAWN	AGUIRRE, 8-11-75
1. TOLERANCES XX± ANGULAR XX± ±	CHECK	Set Assem 1-23-76
2. BREAK ALL SHARP EDGES APPROX. .010	APPR.	PM. O. Klein 1-23-76
3. MACH. SURFACES	MATERIAL	
4. ALL DIMS IN INCHES.	FINISH	
	MODEL NO.	SF/ST
	SCALE	SIZE
		D 301292-200
	NEXT ASSY	301291
DO NOT SCALE THIS DRAWING	WEIGHT	SHEET 1 OF 3

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PERKIN-ELMER
Memory Products Division

SCHEMATIC,
I/O

CODE
D 108
REV.
B



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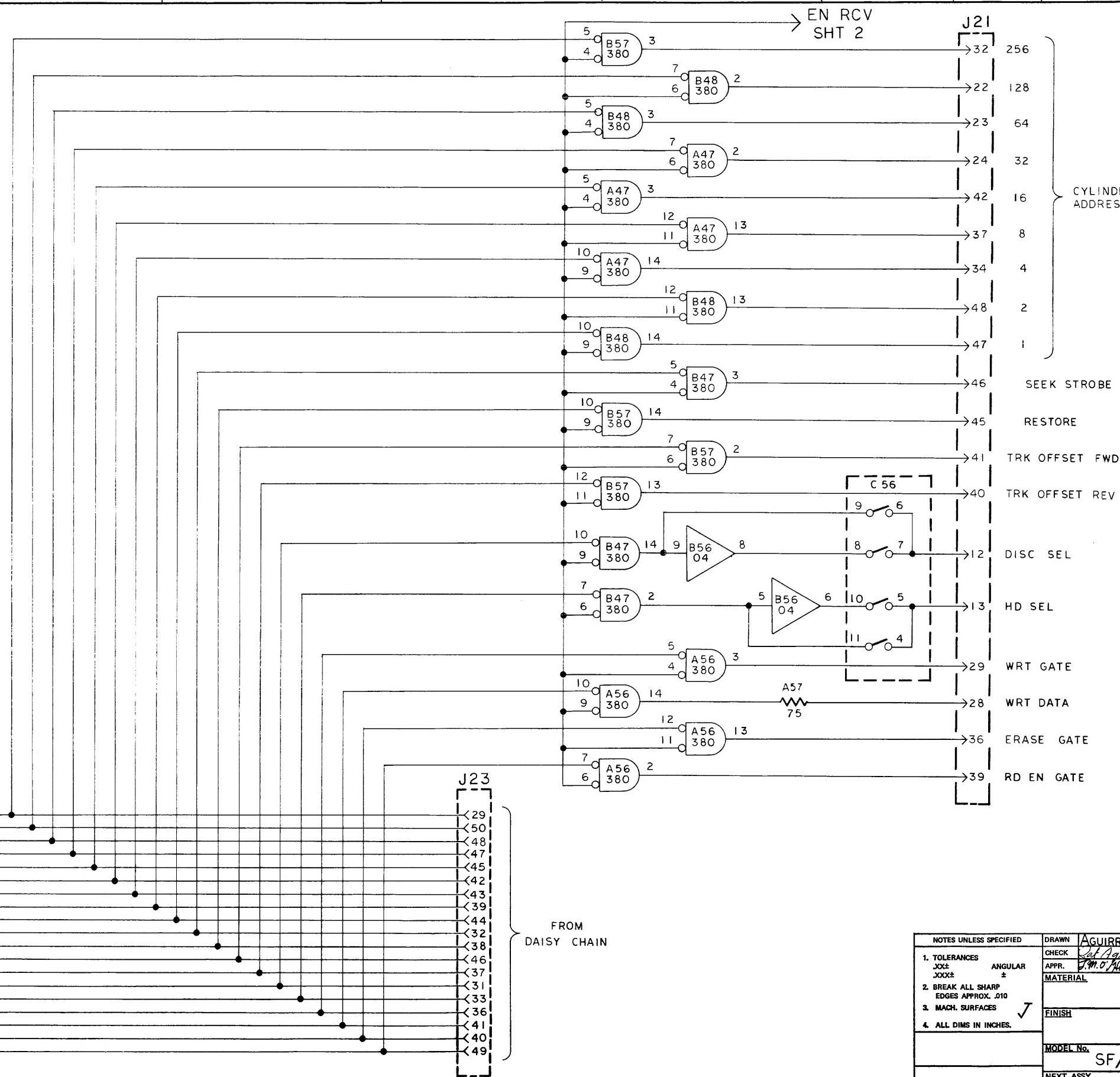
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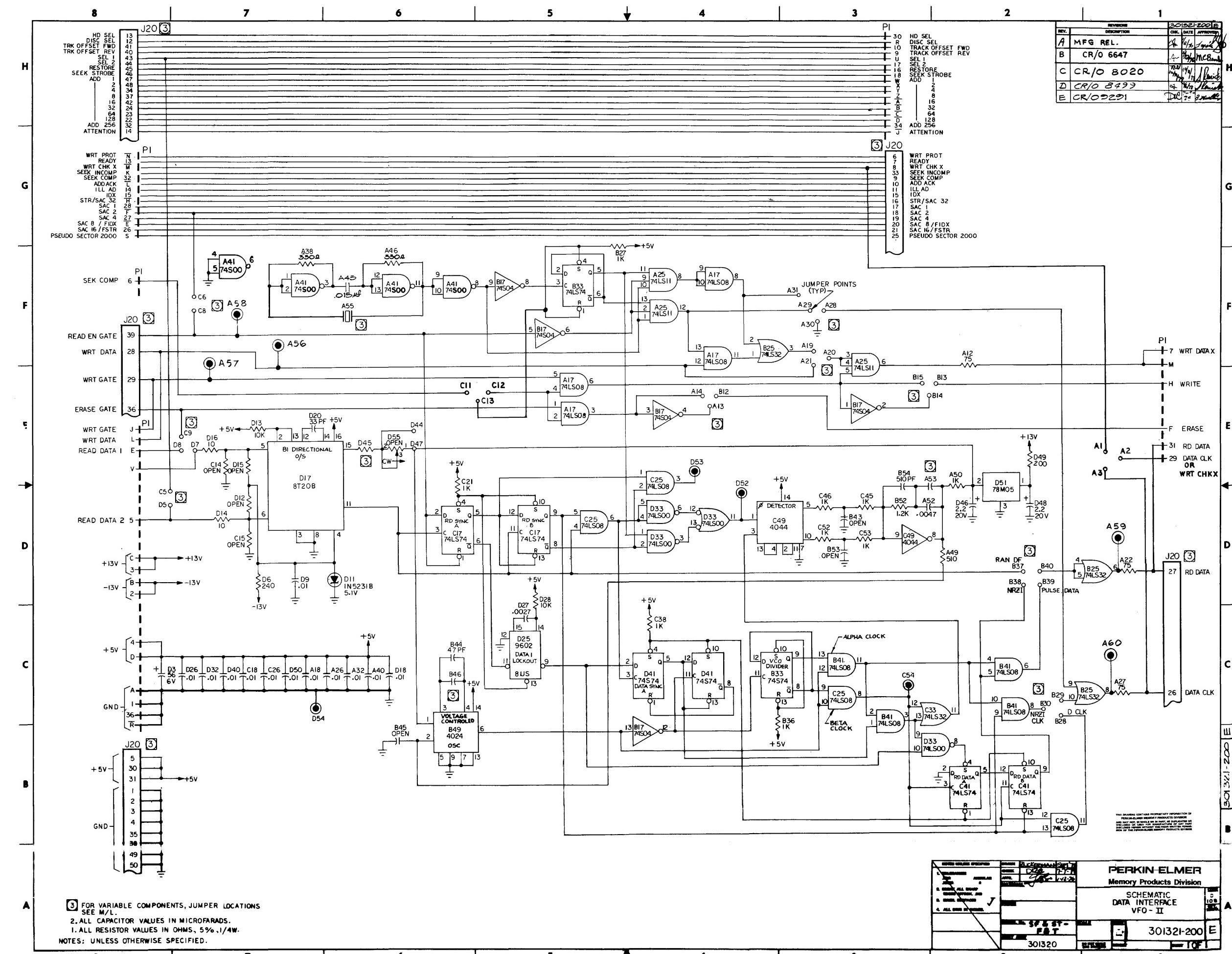
NOTES UNLESS SPECIFIED	DRAWN	AGUIRRE, L	8/18/75
1. TOLERANCES JXX ± ANGULAR JXXZ ±	CHECK	Jeff Aguirre	1/23/76
2. BREAK ALL SHARP EDGES APPROX. .010	APPR.	J. M. O' Neam	1/23/76
3. MACH. SURFACES	MATERIAL		
4. ALL DIMS IN INCHES.	FINISH		
	MODEL NO.	SF/ST	SCALE
	NEXT ASSY	301291	SIZE
			D 301292-200
	DO NOT SCALE THIS DRAWING	WEIGHT	SHEET 3 OF 3

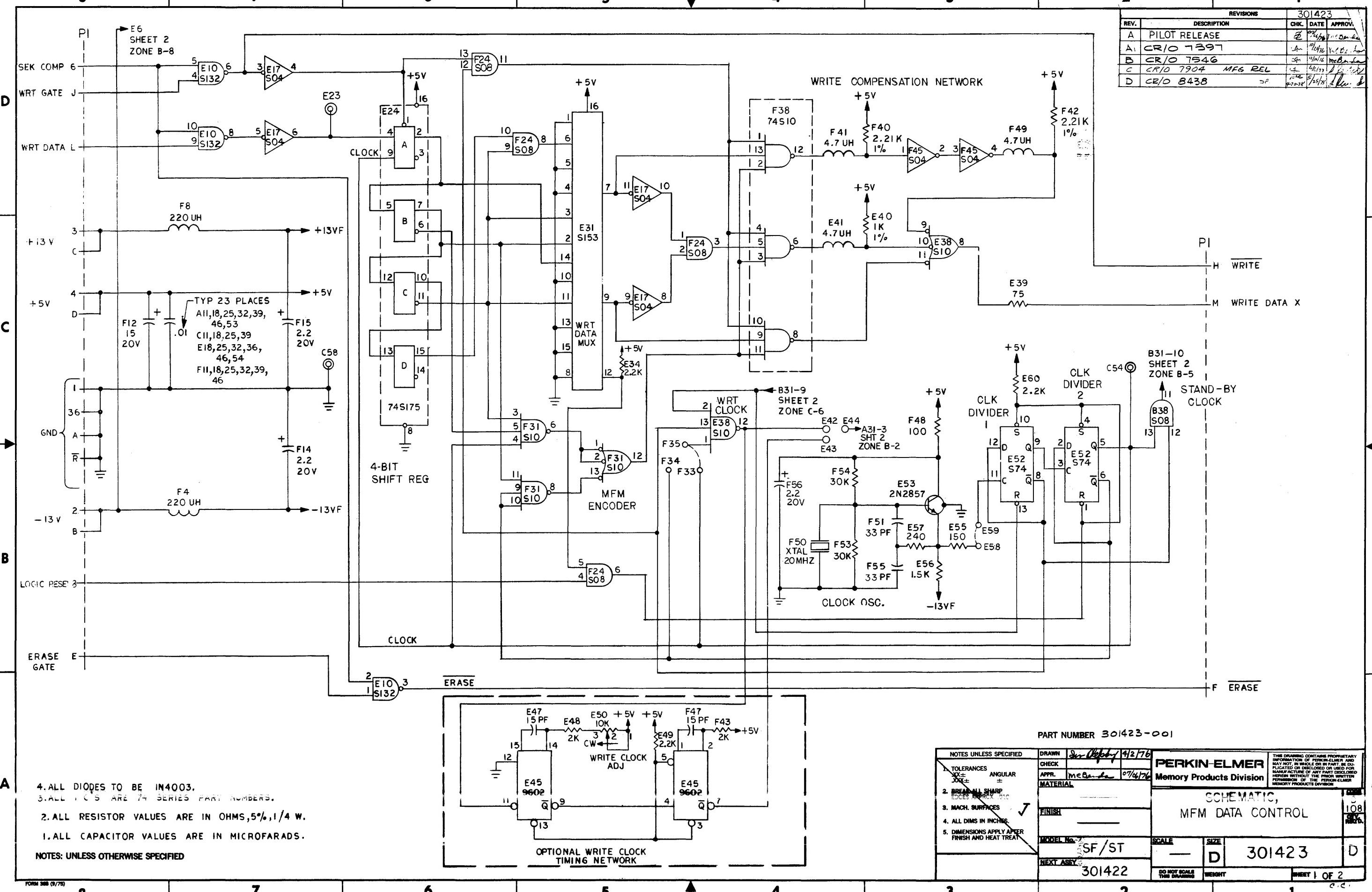
PERKIN-ELMER
Memory Products Division

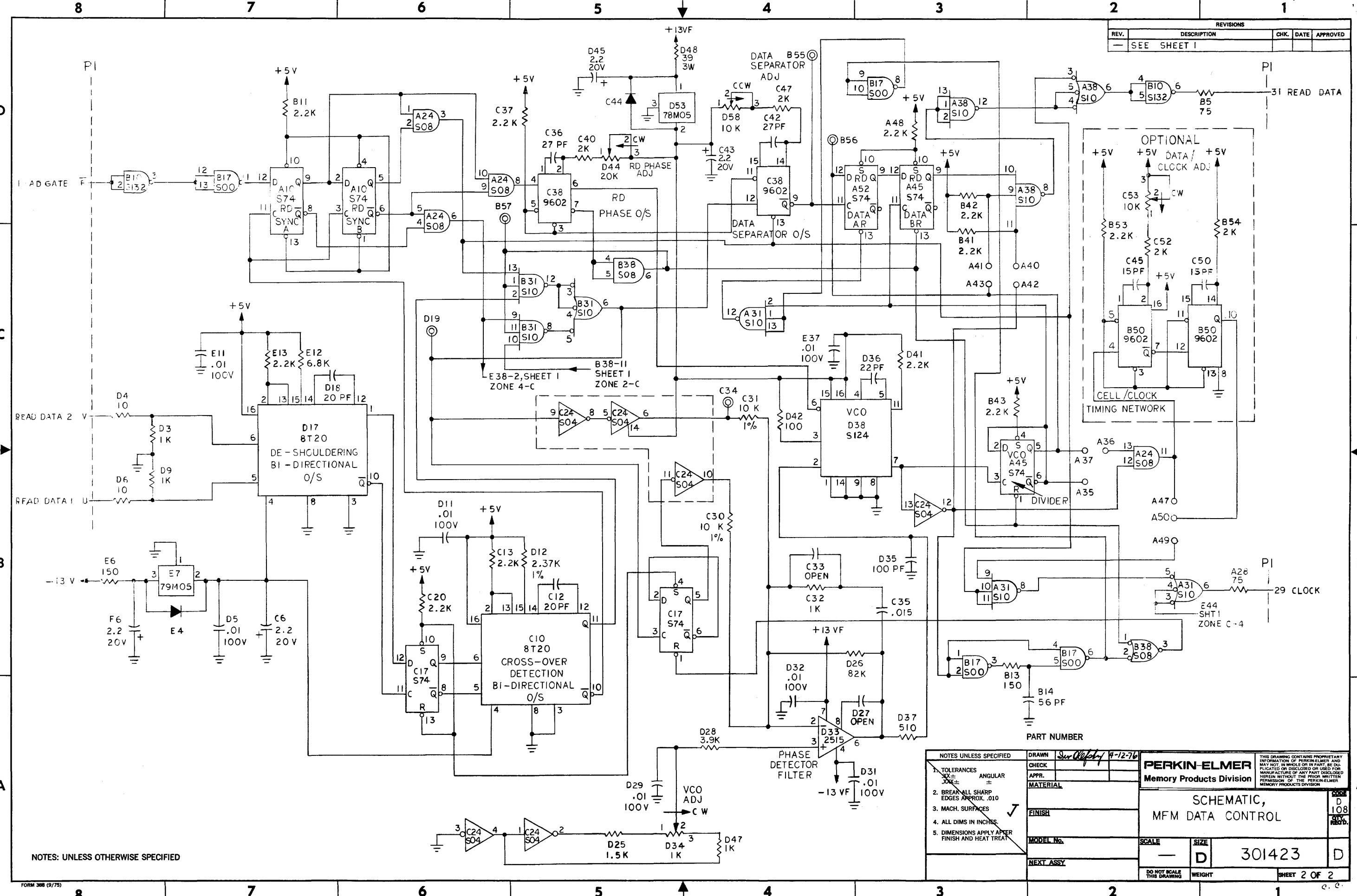
SCHEMATIC,
I/O

CODE
D
108
GTY.
REC'D.

B

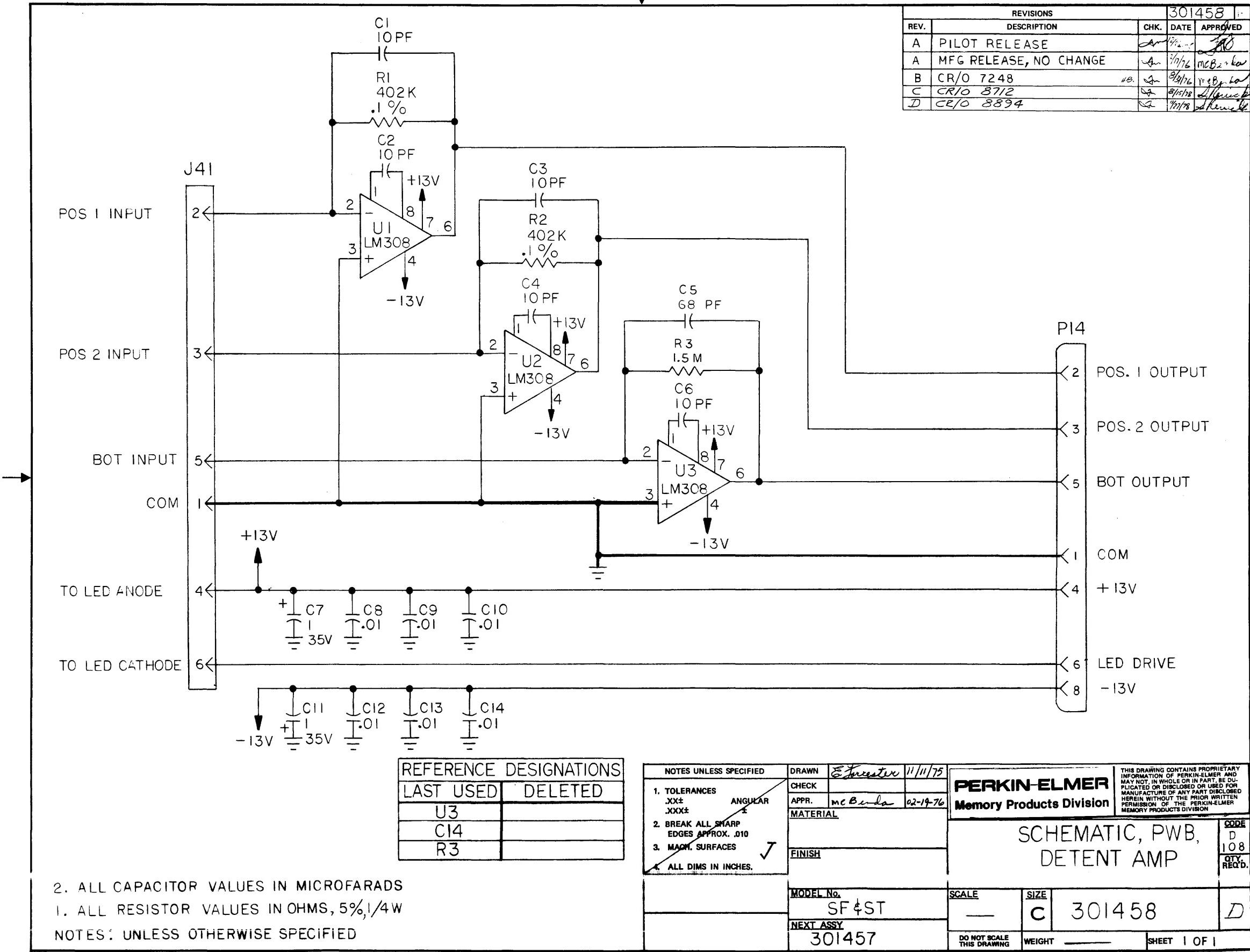


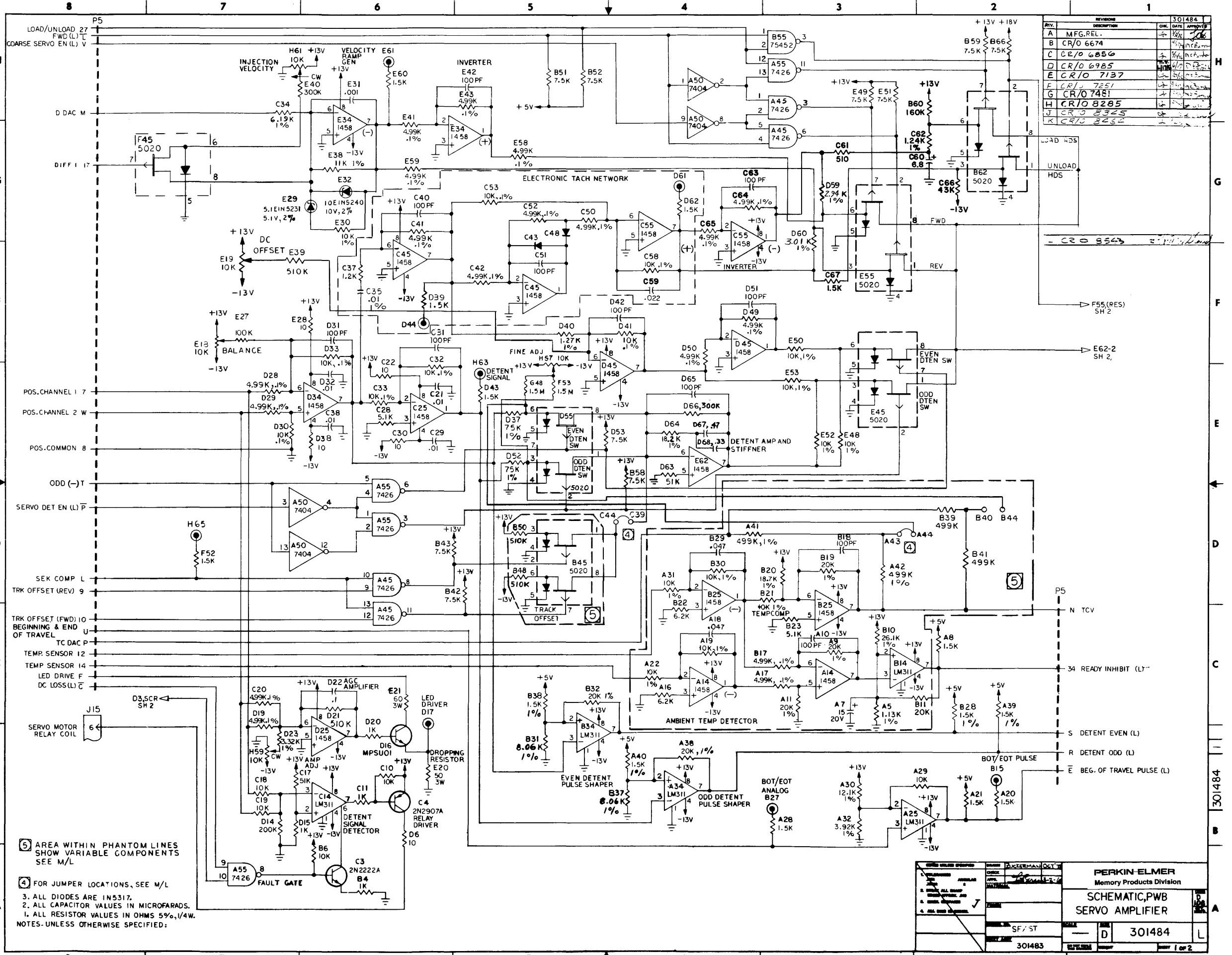




NOTES: UNLESS OTHERWISE SPECIFIED

REVISIONS			
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A	PILOT RELEASE	JW	1/16/76
A	MFG RELEASE, NO CHANGE	AM	1/16/76
B	CR/O 7248	JB	3/17/76
C	CR/O 8712	JB	8/15/76
D	CR/O 8894	JB	1/17/76





PERKIN-ELMER
Memory Products Division

SCHEMATIC,PWB
SERVO AMPLIFIER

D 301484

301483

REVISIONS				
REV.	DESCRIPTION	CHK.	DATE	APPROVED
—	SEE SH. I			

B62-2
SH I

P5

AC LOSS ID 20

FWD INHIBIT 6

G65
ICEIN5240
10V, 2%G64
IOEIN5240
10V, 2%E66
100 PFE67
10K, 1%

+13V

E62
1458

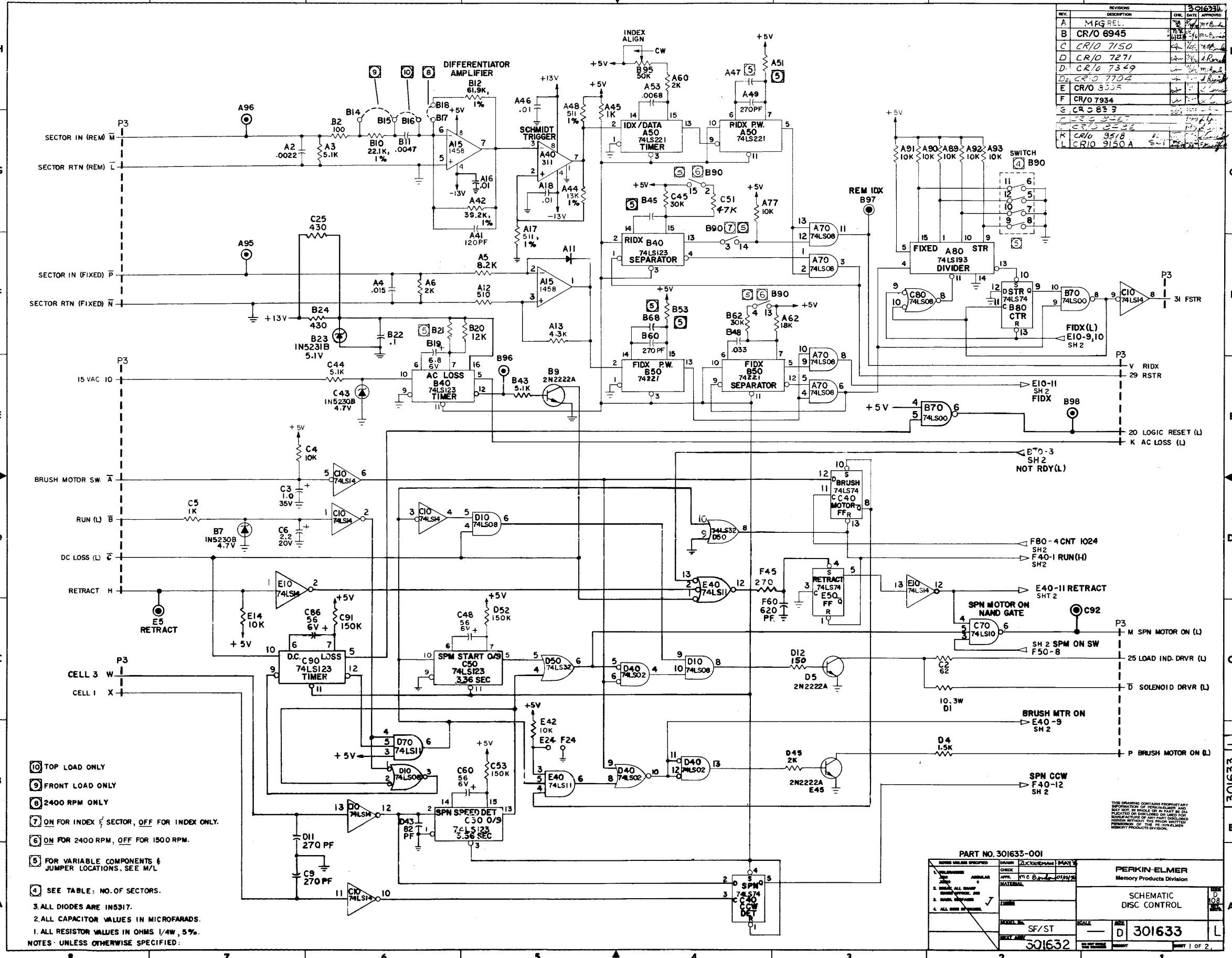
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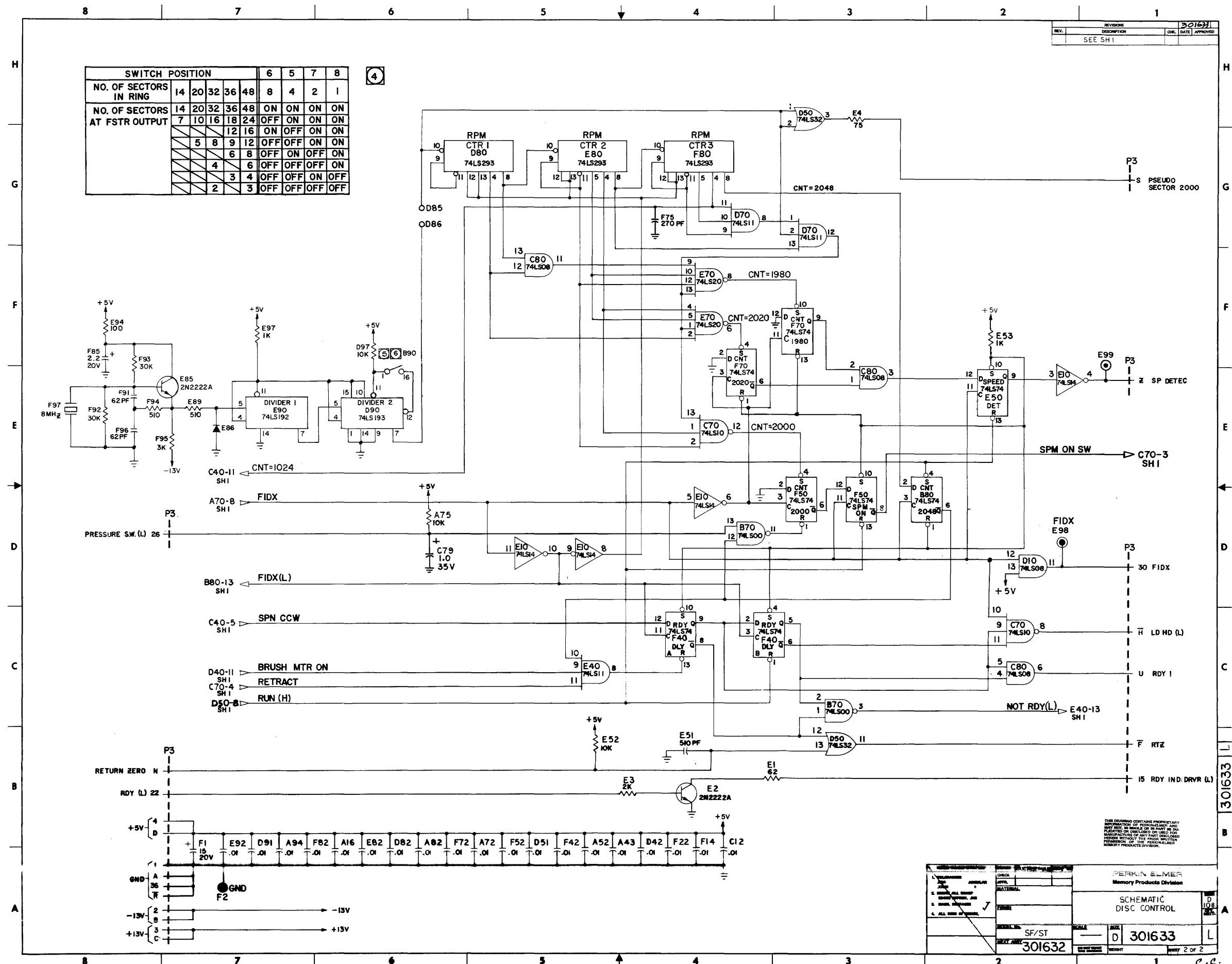
+13V

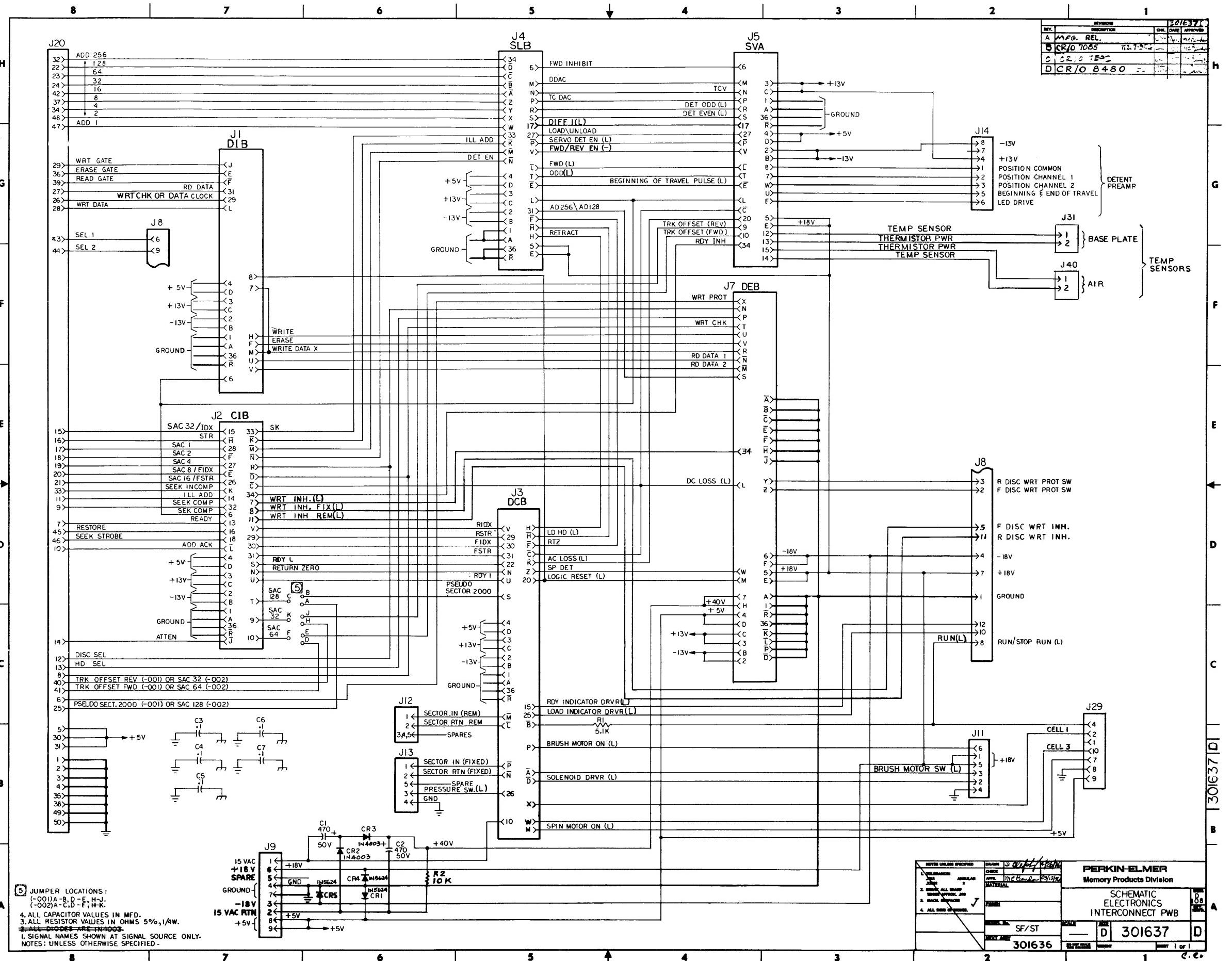
-13V

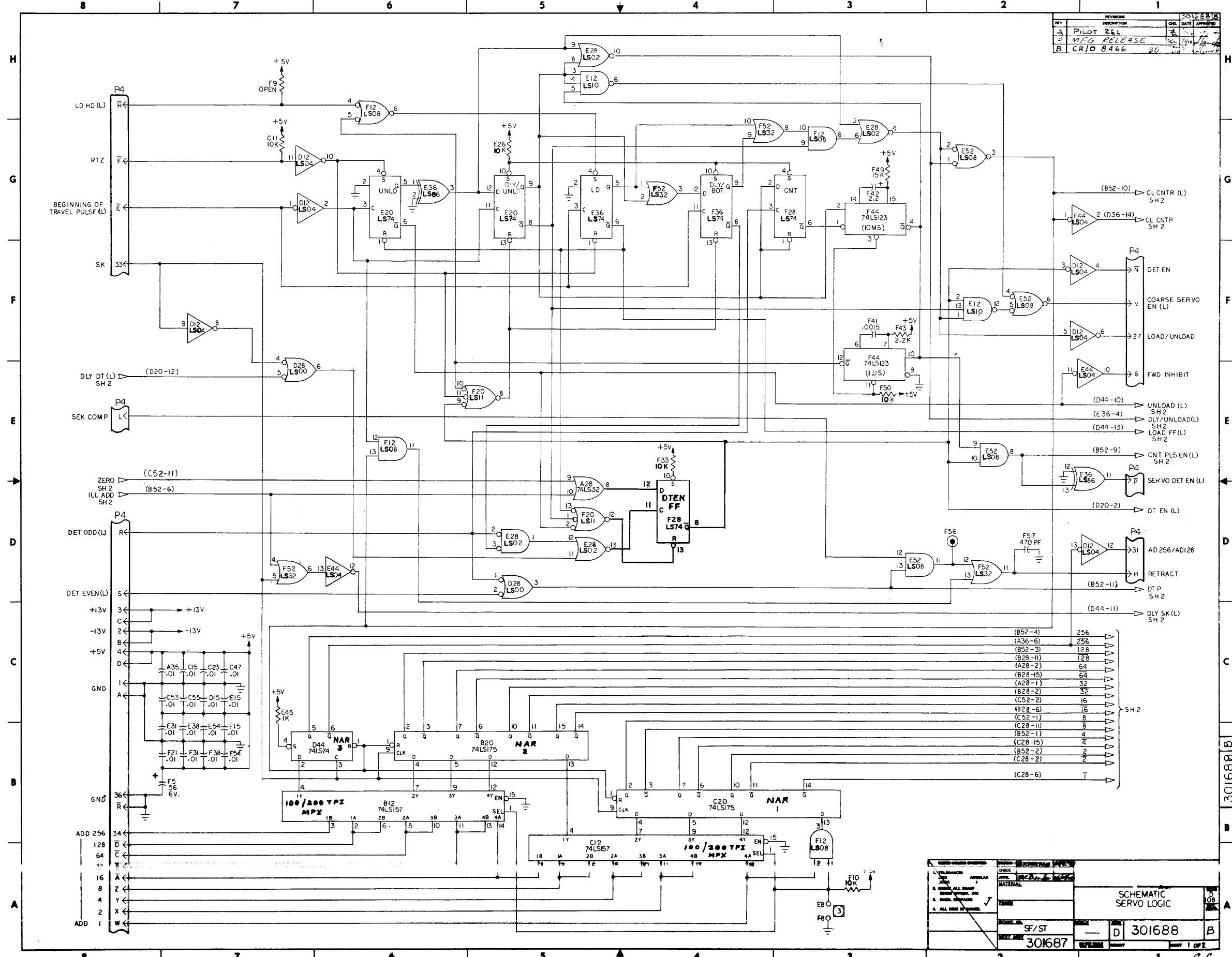
SUMMING AMPLIFIER

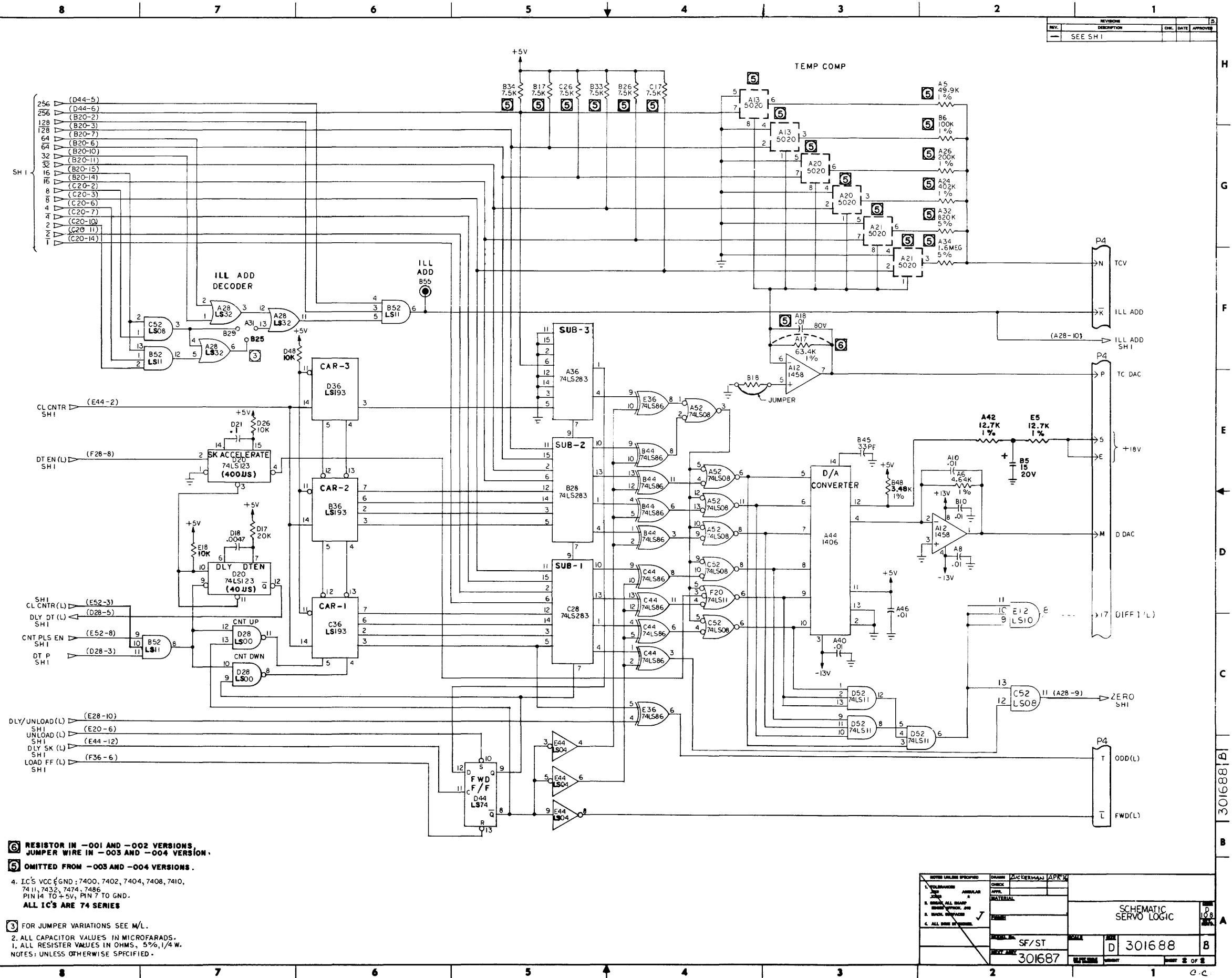
F63
16.9KF62
16.9KG62
100K, 1%G63
8.45KG66
.01G67
.01G66
.01

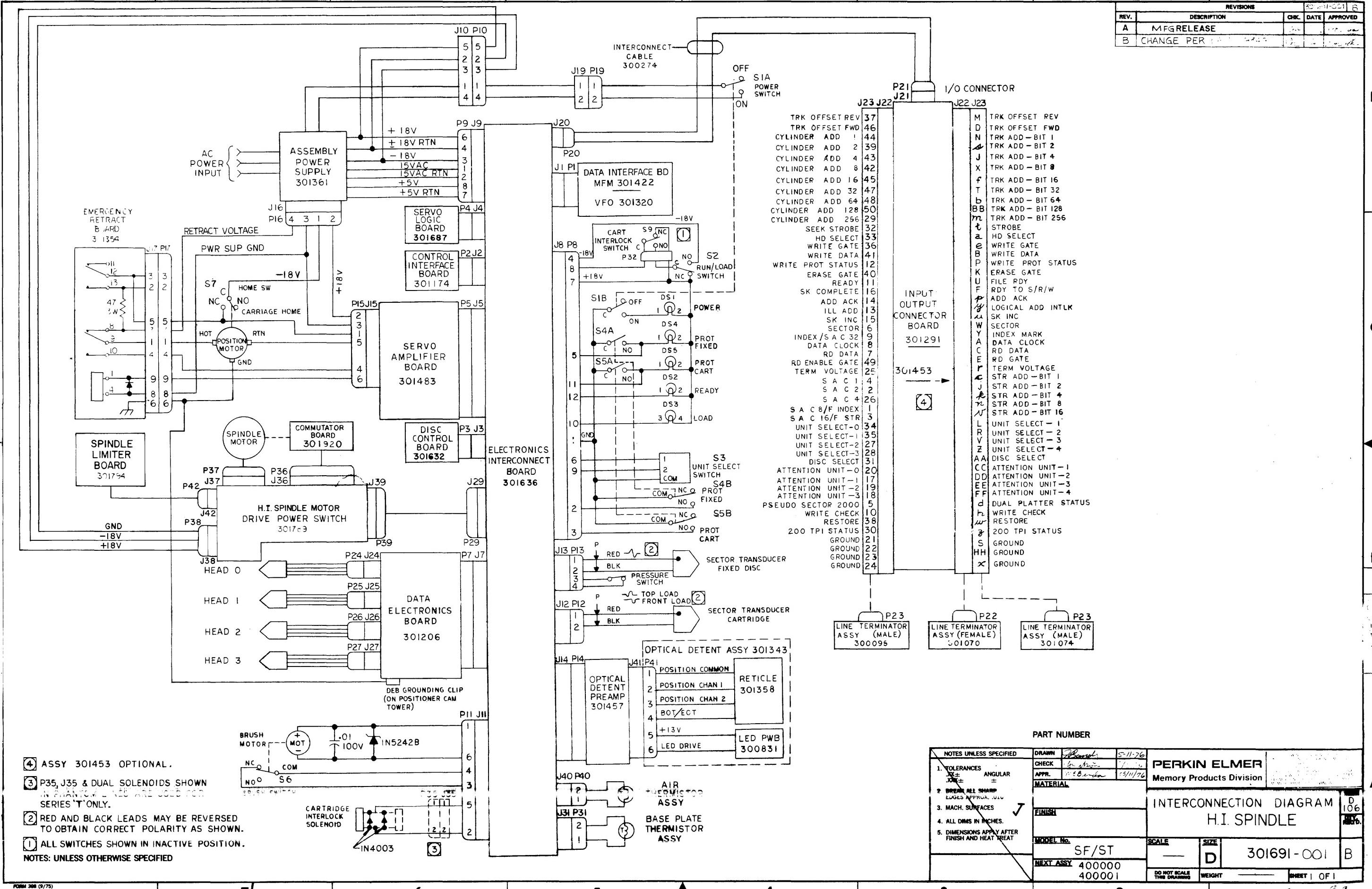


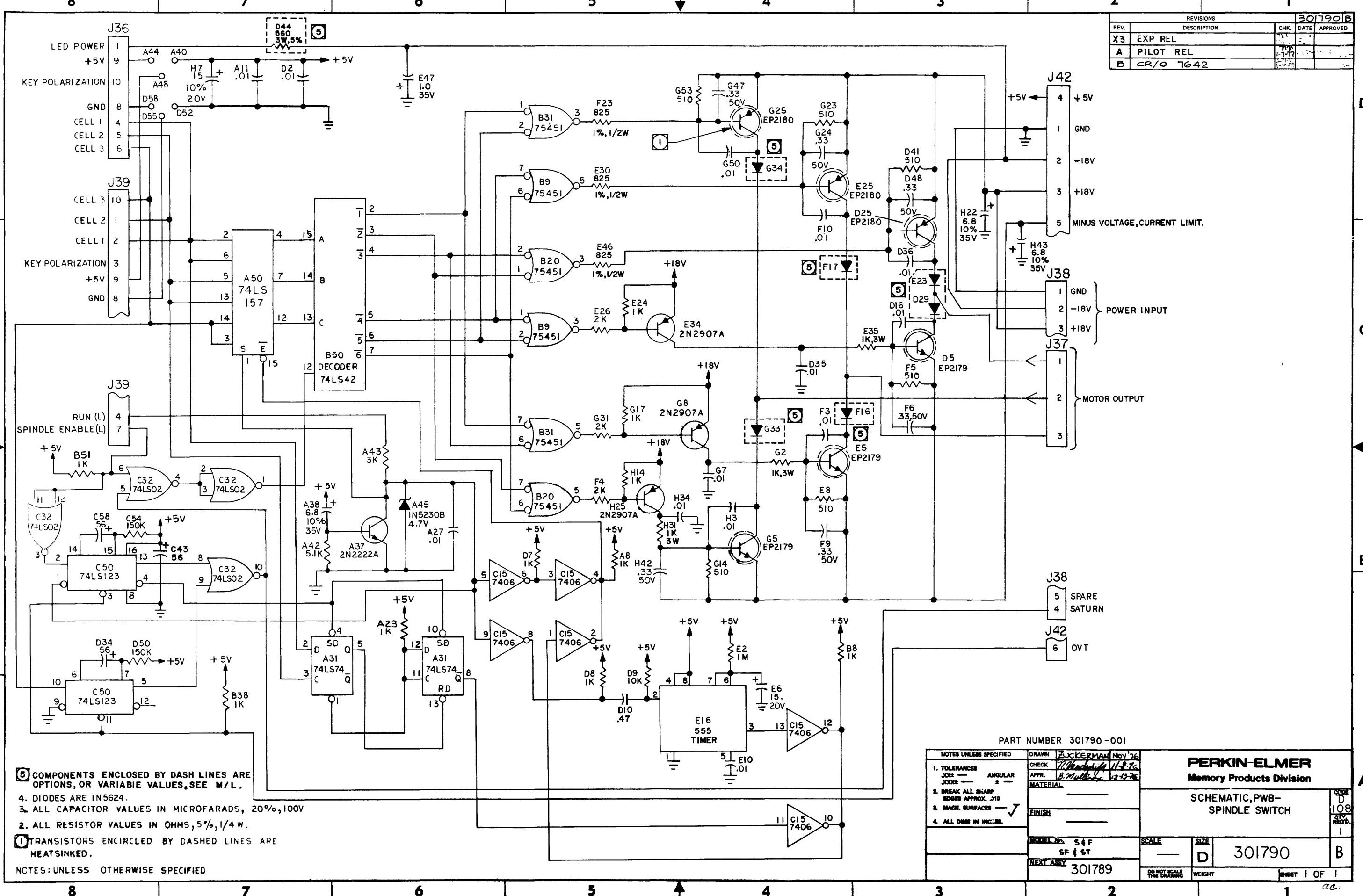


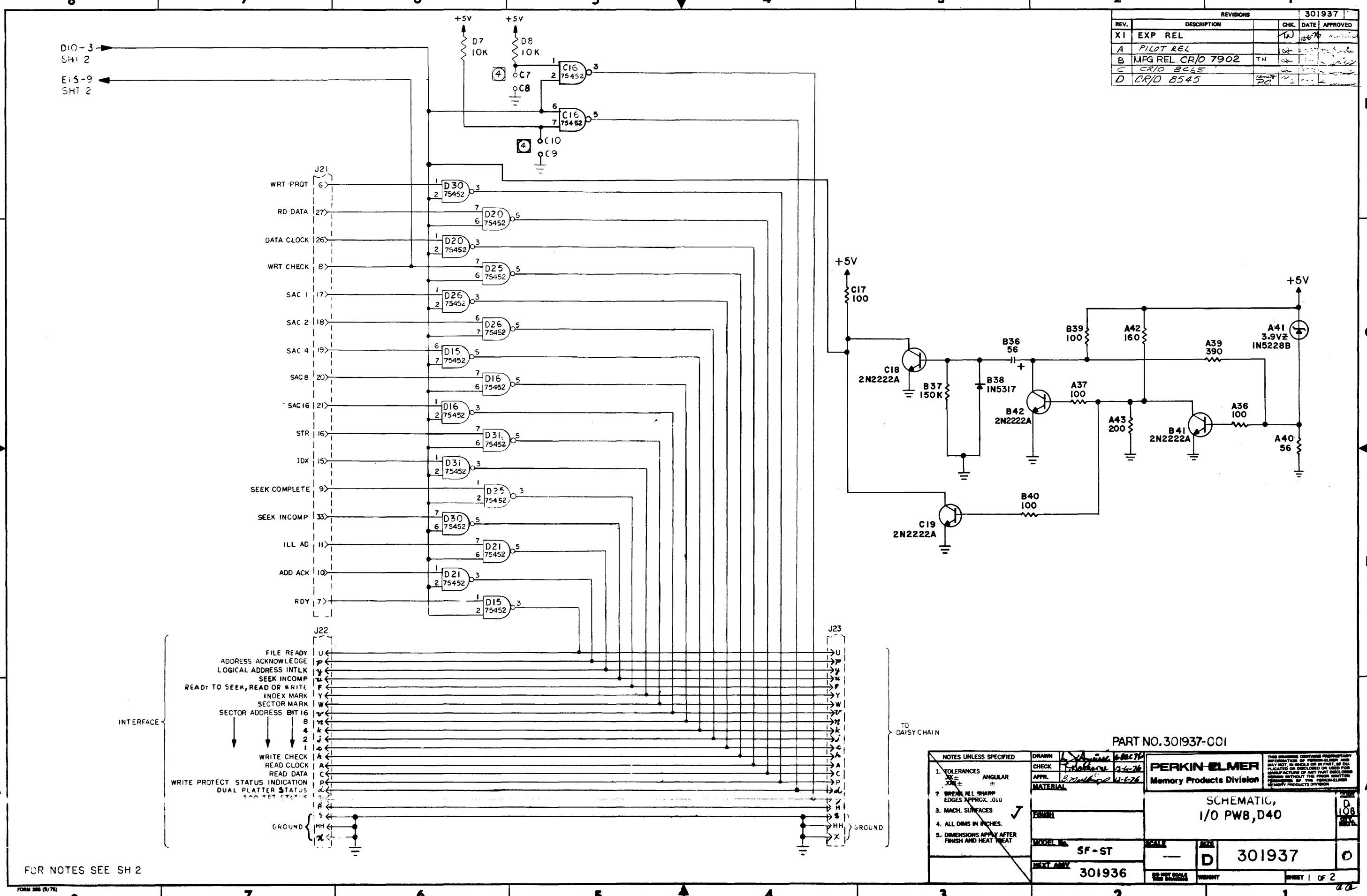












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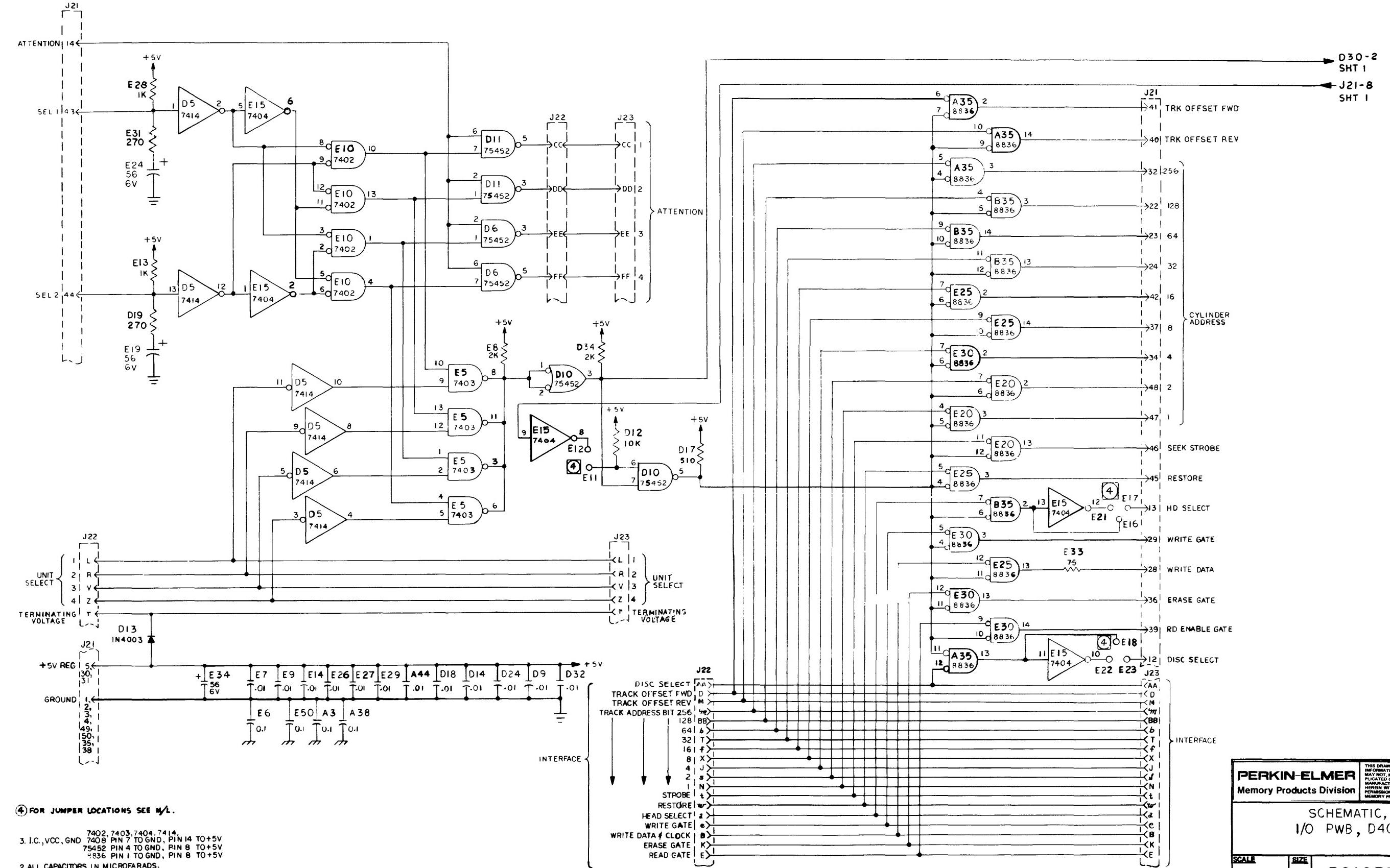
4

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2

1

REV		DESCRIPTION		CHK	DATE	APPROVED
SEE SHEET 1						



④ FOR JUMPER LOCATIONS SEE M/L.

3. I.C., VCC, GND 7402, 7403, 7404, 7414,
7408 PIN 7 TO GND, PIN 14 TO +5V
75452 PIN 4 TO GND, PIN 8 TO +5V
7436 PIN 1 TO GND, PIN 8 TO +5V

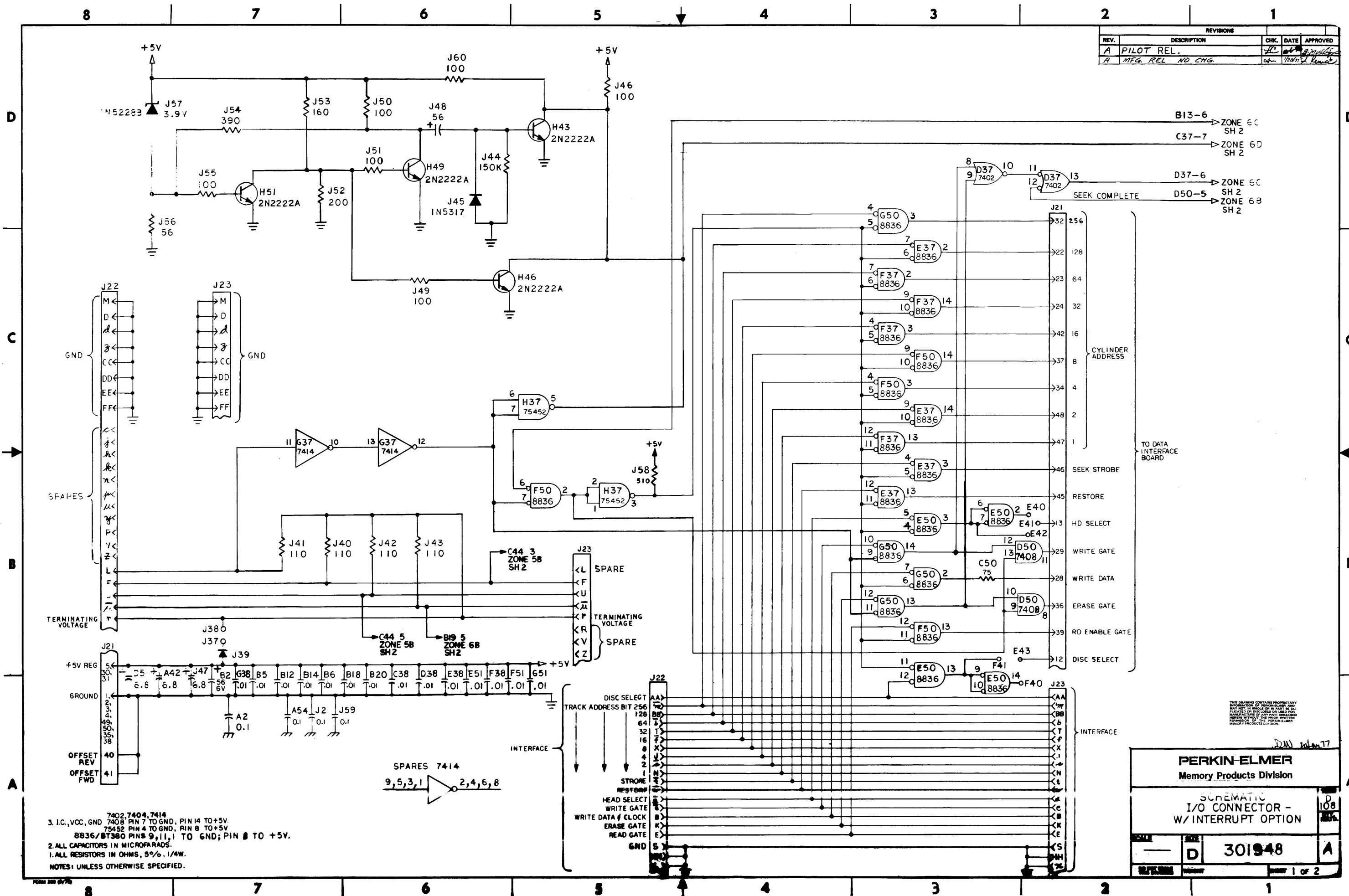
2. ALL CAPACITORS IN MICROFARADS.

1. ALL RESISTORS IN OHMS, 5% .1/W.

NOTES: UNLESS OTHERWISE SPECIFIED.

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SCHEMATIC, I/O PWB, D40		CODE D 108 REV. D
SCALE	SIZE	D 301937 D
DO NOT SCALE THIS DRAWING		WEIGHT

NET 2 OF 2



8

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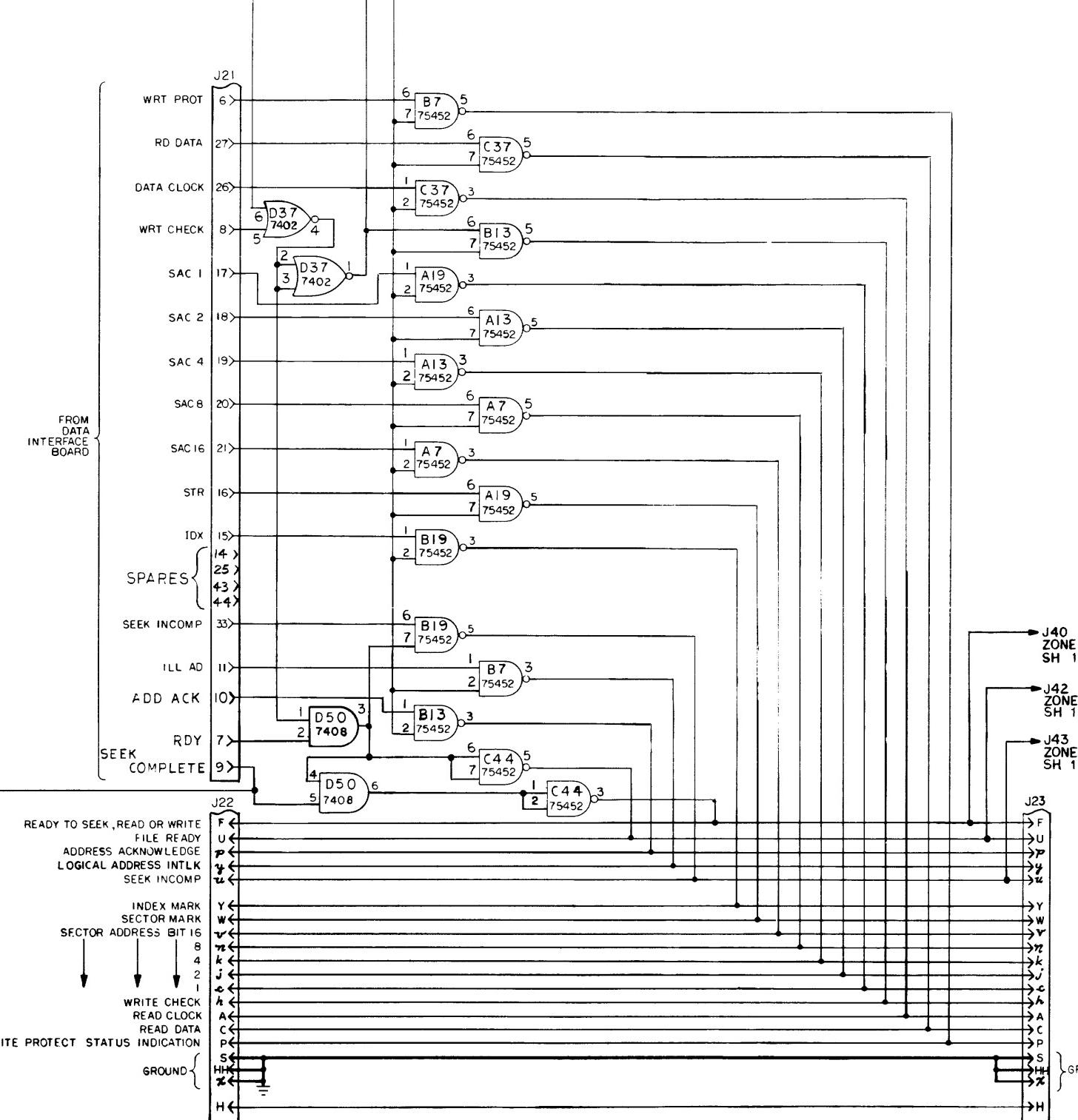
4

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1

REVISIONS			
REV.	DESCRIPTION	CHK.	DATE APPROVED
	SEE SH. I		

F50-6, ZONE 5B
SH 1H57-5, ZONE 5C
SH 1D37-13, ZONE 2D
SH 1D37-12, ZONE 2D
SH 1

NOTES UNLESS SPECIFIED	DRAWN	11/29/76
1. TOLERANCES	CHECK	T. Nakamura 12-6-76
2. BREAK ALL SHARP EDGES APPROX. .010	APPR.	B. Brubaker 12-6-76
3. MACH. SURFACES	MATERIAL	
4. ALL DIMS IN INCHES.	FINISH	
5. DIMENSIONS APPLY AFTER FINISH AND HEAT TREAT	MODEL NO.	SF/ST
	NEXT ASSY	301947

NOTES UNLESS SPECIFIED

1. TOLERANCES

2. BREAK ALL SHARP EDGES APPROX. .010

3. MACH. SURFACES

4. ALL DIMS IN INCHES.

5. DIMENSIONS APPLY AFTER FINISH AND HEAT TREAT

DRAWN

CHECK

APPR.

MATERIAL

FINISH

MODEL NO.

NEXT ASSY

301947

DO NOT SCALE THIS DRAWING

WEIGHT

SHEET 2 OF 2

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MEMORY PRODUCTS DIVISION.

J.W. 20 Jan 77

PERKIN-ELMER
Memory Products DivisionSCHEMATIC
I/O CONNECTOR -
W/INTERRUPT OPTION

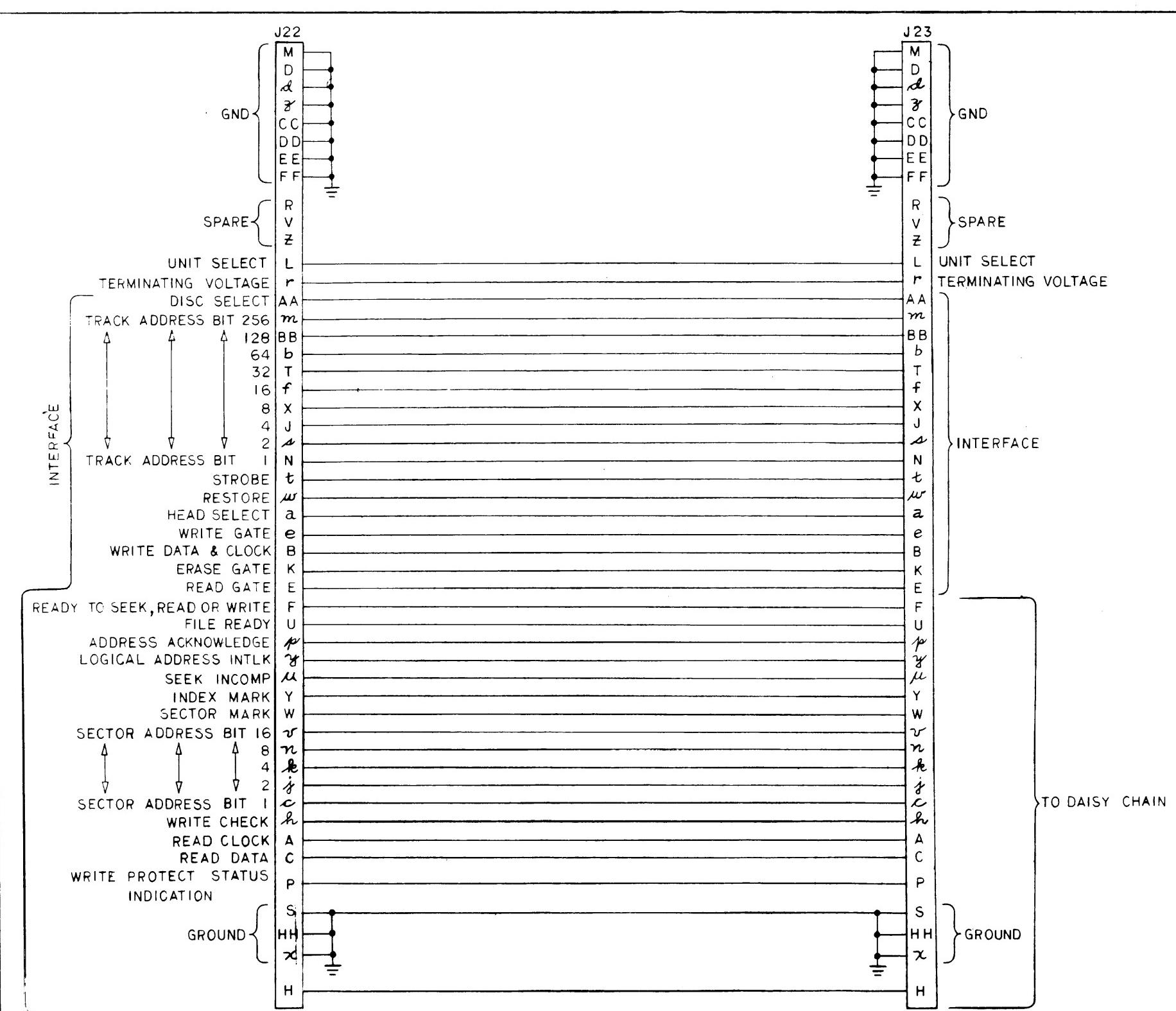
CODE

TO8

QTY

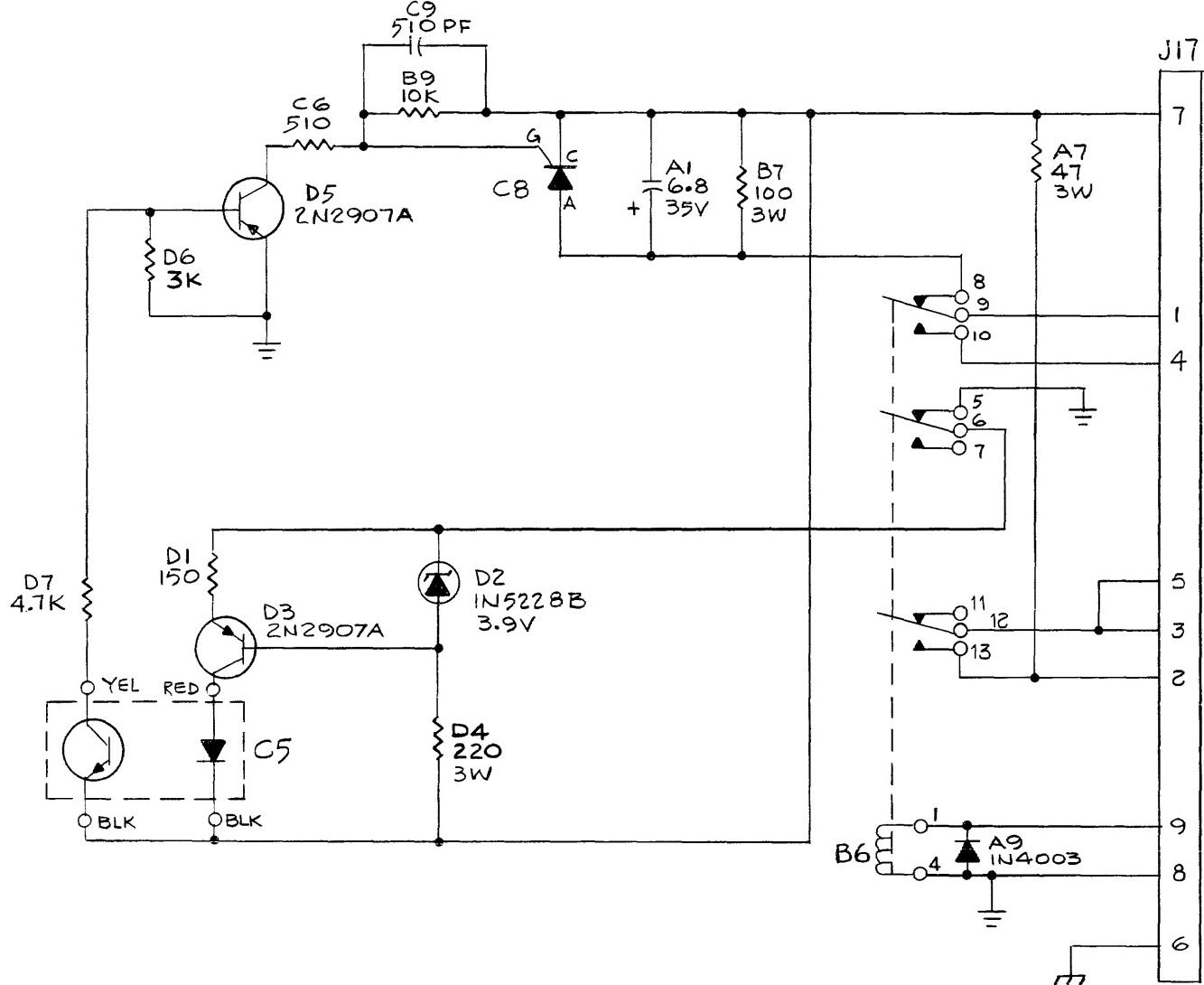
RATIO

A



REV. DESCRIPTION				CHK.	DATE	APPROVED
X	EXP. RELEASE					
A	PILOT RELEASE					
A	MFG. RELEASE NO. HG					

DRAWN	See Sheet 17-276	THIS DRAWING CONTAINS PROPRIETARY INFORMATION OF PERKIN-ELMER AND MAY NOT, IN WHOLE OR IN PART, BE REPRODUCED, COPIED OR DISCLOSED, OR USED FOR MANUFACTURE OF ANY PART, DISCLOSED OR UNDISCLOSED, WITHOUT THE WRITTEN PERMISSION OF THE PERKIN-ELMER MEMORY PRODUCTS DIVISION
CHECK	11-10-76	
APPR.	mcB	1-5-77
REVISIONS		
PERKIN-ELMER		
Memory Products Division		
SCHEMATIC, PIGGYBACK -		
I/O CONN.		
WITH INTERRUPT OPTION		
F & T	D	301953
301952		
REV. 1 OF 1		



REVISIONS				302065-200
REV.	DESCRIPTION	DFTG	CHK.	DATE APPROVED
X1	EXP REL.	4-27-77	JL	4-12-77
A	MFG REL	SC	JL	4-27-77
B	CR/O 9349	D	JL	4-27-77

PART NUMBER 302065-200

NOTES UNLESS SPECIFIED	DRAWN	ZUCKERMAN APR '77	THIS DRAWING CONTAINS PROPRIETARY INFORMATION OF PERKIN-ELMER AND MAY NOT, IN WHOLE OR IN PART, BE DUPLICATED, REPRODUCED, OR USED FOR MANUFACTURE OF ANY PART DISCLOSED HEREIN WITHOUT THE PRIOR WRITTEN PERMISSION OF THE PERKIN-ELMER MEMORY PRODUCTS DIVISION
1. TOLERANCES $\pm\%$ ANGULAR $\pm\%$	CHECK	4-8-77	
2. BREAK ALL SHARP EDGES APPROX. .010	APPR.	4-29-77	
3. MACH. SURFACES	MATERIAL		
4. ALL DIMS IN INCHES.	FINISH		
5. DIMENSIONS APPLY AFTER FINISH AND HEAT TREAT			
	SCHEMATIC	CODE	
	EMERGENCY RETRACT	D 108	
MODEL No.	SIZE	QTY. REQ'D.	
ST (20 MB)	C	302065-200 B	
NEXT ASSY			
302064	DO NOT SCALE THIS DRAWING	WEIGHT	SHEET 1 OF 1

2. ALL CAPACITOR VALUES IN MICROFARADS.
 1. ALL RESISTOR VALUES IN OHMS, 5%, 1/4W
 NOTES: UNLESS OTHERWISE SPECIFIED

SECTION 2

PWB ASSEMBLY DRAWINGS

2.1 INTRODUCTION

This section contains the assembly drawings and material lists for all PWB assemblies in the SF and ST Disk Drives. These documents are identified in the Index. Logic schematics and power supply schematics are provided in Section 1 of this volume.

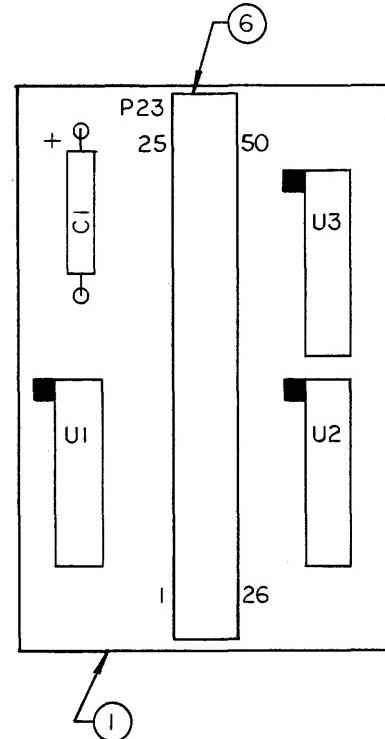
The assembly drawings identify every part on any given PWB assembly. Parts are identified either by item number (e.g., 1, 2, 3, etc.), or by circuit reference number (e.g., R1, C1, U1, etc.), or by coordinate locators (e.g., H2, B23, M35, etc.). The associated material lists incorporate these identification numbers, together with the part description, PERKIN-ELMER part number, and part quantity, i.e., the quantity of a particular part required for the given assembly.

2.2 PWB ASSEMBLY DRAWINGS

The following PWB assembly drawings are provided in numerical sequence, as listed. Included are related material lists.

Title	Dwg. No.
Line Terminator PWB	300095
+5V Regulator PWB and Schematic.....	300200
Line Terminator PWB, D31/33 Female.....	301047
Line Terminator PWB, D31/33 Male.....	301055
I/O Connector PWB, D31/33 (100 TPI Only).....	301062
Line Terminator PWB, D40 Female.....	301070
Line Terminator PWB, D40 Male.....	301074
Control Interface PWB	301174
Data Electronics PWB	301206
I/O Connector PWB.....	301291
Data Interface PWB (VFO).....	301320
Emergency Retract PWB and Schematic	301354
Power Supply	301361
MFM Data Control PWB	301422
Detent Amplifier PWB.....	301457
Servo Amplifier PWB.....	301483
Disk Control PWB.....	301632
Electronics Interconnect PWB.....	301636
Servo Logic PWB.....	301687
Spindle Switch PWB	301789
Spindle Limiter/5V Drive and Schematic	301794
Commutator Board, PWB and Schematic	301920
i/O PWB, D40.....	301936
PWB I/O Connector With Interrupt Option.....	301947
Emergency Retract PWB	302064

REVISIONS		300095	D ₁
REV.	DESCRIPTION	CHK.	DATE APPROVED
A	ENG. REL.	JG	1/24/73
B	C1 VALUE FROM .68UF TO 15UF ADD CALLOUTS TO PINS	PB	1/31/73 JJB/cw
C	CHANGED JI CALLOUT TO P23	PB	3/2/73 a Lang
D	MFG. REL. NO CHG. SEE E.O. REDRAWN FOR CLARITY	PB	4/2/73 JG & JM
D ₁	CR10 8376 J-B	MM	4-20-73 4/2/73 JHemick



NOTES UNLESS SPECIFIED	DRAWN	M. Miyamoto	7/18/73
1. TOLERANCES $\pm .005$ ANGULAR $\pm .005$	CHECK		
2. BREAK ALL SHARP EDGES APPROX. .010	APPR.		
3. MACH. SURFACES	MATERIAL		
4. ALL DIMS IN INCHES.	FINISH		
	MODEL No.	DISC	
	NEXT ASSY	300050 300250	
	SCALE	2:1	SIZE
		C	300095
	DO NOT SCALE THIS DRAWING	WEIGHT	SHEET 3 OF 3

PERKIN-ELMER
Memory Products Division

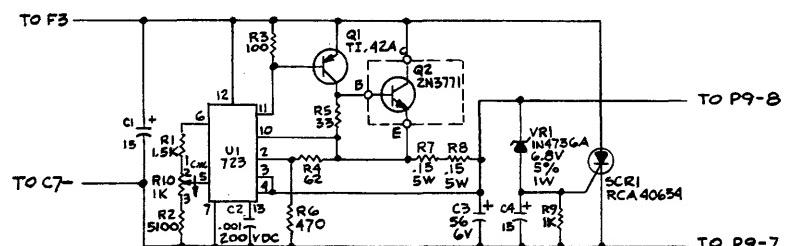
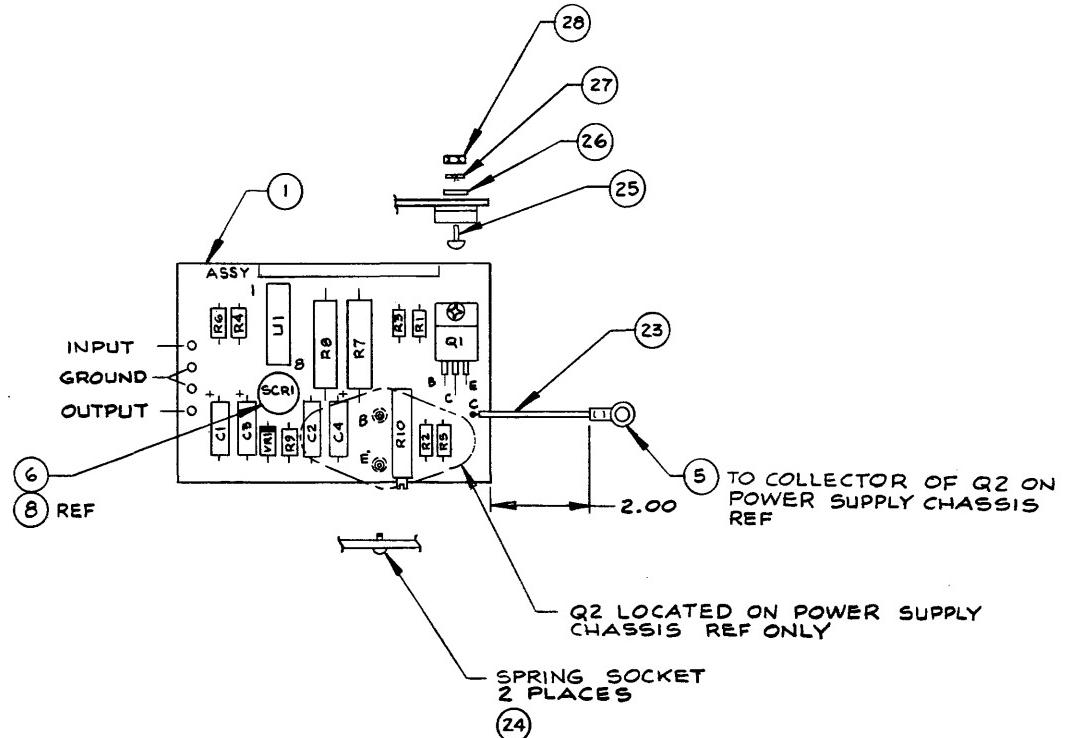
ASSEMBLY, P.W.B.
LINE TERMINATOR

CODE D 100
QTY REQ'D. 1
D₁

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FORM 209 (5/74)

REVISIONS				
REV.	DESCRIPTION	CHK.	DATE	APPROVED
N	CR/O 6831	C4	5/14/76	McBride
N1	CR/O 8098	TJW	10/14/77	J. Reina
N2	CR/O 9189A	D. VHOA	10-23-77	B. Miller



PART NUMBER 300200-001

NOTES UNLESS SPECIFIED	DRAWN	GARRY AGUIRRE	3-26-73
	CHECK	A. GUY REN KAO	4-2-73
	APPR.	TERRY O'BRIAN	1-24-73
MATERIAL			
FINISH			
ASSEMBLY, PWB + 5 REGULATOR	CODE	D	120
	QTY.	1	REQ'D.
SCALE	SIZE	300200	
None	C	N2	
DO NOT SCALE THIS DRAWING		WEIGHT	SHEET 2 OF 2

PERKIN-ELMER
Memory Products Division

300200

SERIES FST

NEXT ASSY 301361
300346

e.c.

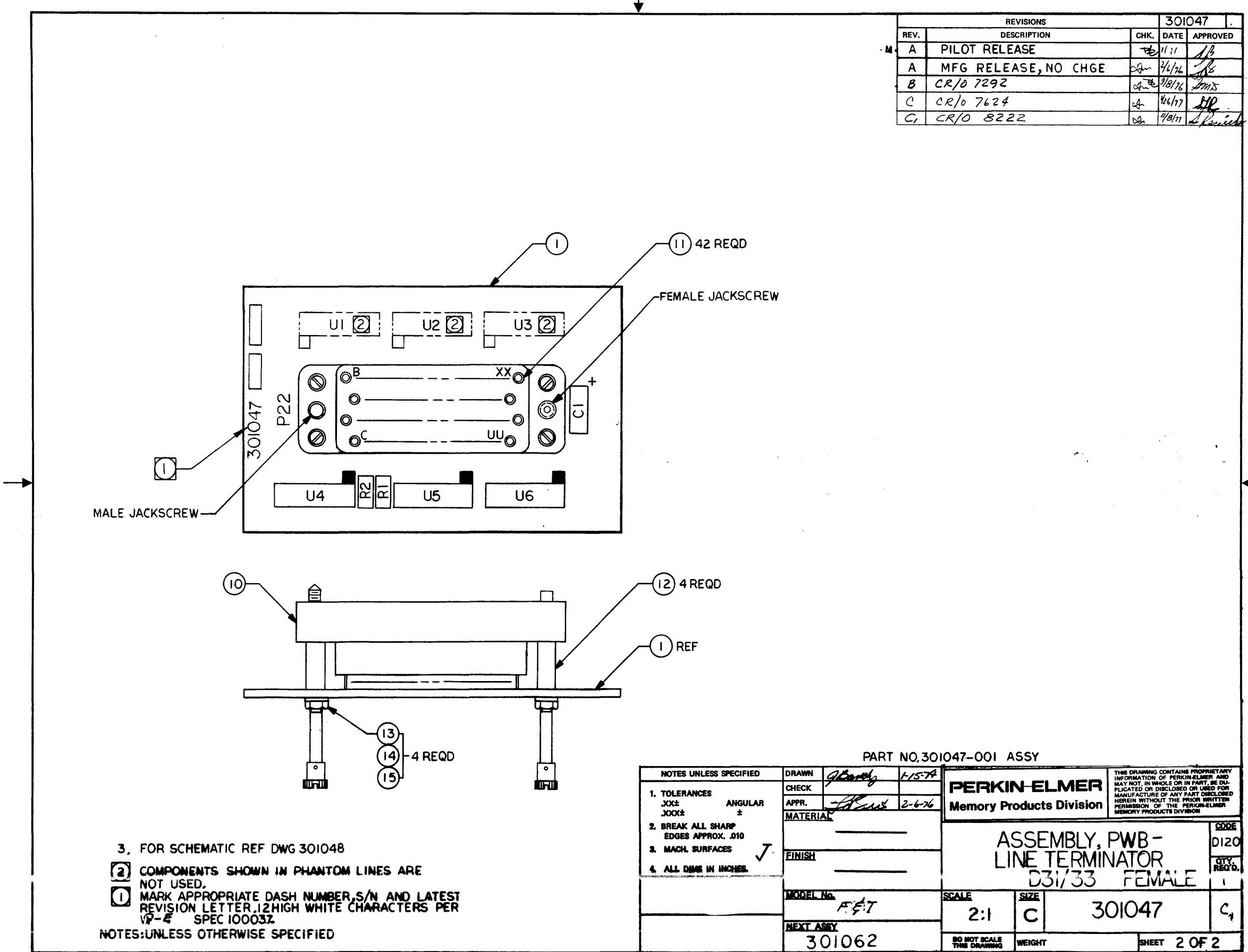
NOTES: UNLESS OTHERWISE SPECIFIED

PERKIN-ELMER		MATERIAL LIST		PART NUMBER	REV.
Memory Products Division				300200-001	N2
TITLE ASSY. PUB. +5V REGULATOR.		MODEL F 4 T		DATE 5/14/75 SHEET 1 OF 2	
ITEM NO.	DESCRIPTION	PART NO.	REOD	MIN. REV.	ACT. REV.
				NEXT ASSEMBLY/USED ON	
				300346-001	
1	Board, Processed.	300199-001	1	F	
2					
3					
4	IC, Voltage Regulator 223	100103-001	1		U1.
5	Terminal, Ins. Rinn Tongue	100057-006	1		
6	Insulator, Transistor	100223-001	1		
7	Transistor, Pwr. TI.P12A	101043-001	1		Q1.
8	Thyristor	S2000B	100152-001	1	SCR1.
9	Diode, Zener, 6.2V	100161-001	1		V81.
10	Capacitor, Polyfilm .001uf	101005-102	1		C2.
11	Capacitor, 10 ⁶ , 2W 15uf	101002-156	2		C1,C4.
12	Capacitor, " 6V 56uf	101001-566	1		C3.
13					
14	Resistor, Variable, 1K	101006-102	1		R10.
15	Resistor, W.W., 5, 5W, .15	100111-012	2		R7,B.
16	Resistor, 3 ³ , 1M	33	101156-337	1	R5.
17	Resistor, " " 62	-620	1		R4.
18	Resistor, " " 100	-101	1		R3.
19	Resistor, " " 470	-471	1		R6.
20	Resistor, " " 1K	-102	1		R9.
21	Resistor, " " 1.5K	-152	1		R1.
22	Resistor, " " 5.1K	-512	1		R2.
23	Wire, Insulated.	101090-912	A/2		
24	Socket, Spring-Assy.	101142-011	2		
25	Screw, Pan Head.	100136-205	1		4-40 x 5/16"
26	Washer, Flat.	100047-200	1		No.4.
27	Washer, Split Lock.	100042-200	1		No.4.
28	Nut.	100043-200	1		4-40.
29					
30					
31					
32	A/W Master	300198-001	0	F	

FORM 209 (R.12/74)

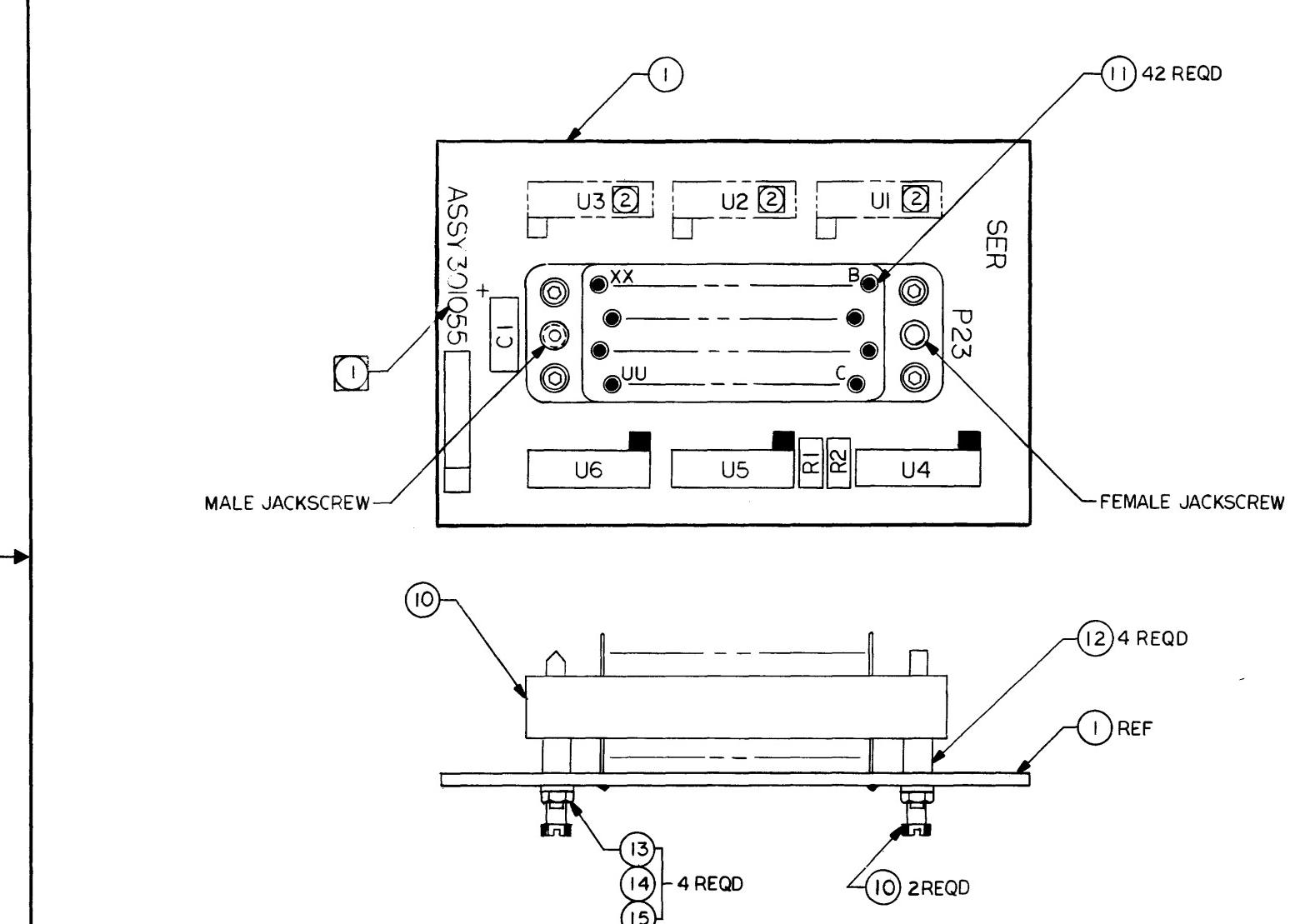
C.C.

REVISIONS				301047
REV.	DESCRIPTION	CHK.	DATE APPROVED	
A	PILOT RELEASE	11	11	11
A	MFG RELEASE, NO CHGE	Am	4/4/76	11
B	CR/0 7292	Am	9/8/76	LMS
C	CR/0 7624	Am	4/6/77	HP
C ₁	CR/0 8222	Am	7/8/77	Spieker



FORM 209 (R 9-77)

REVISIONS				301055
REV.	DESCRIPTION	CHK.	DATE APPROVED	
M-A	PILOT RELEASE	PB	1/11/75	JL
M-B	SEE CR/0 5203	PL	4/2/75	LG
M-C	MFG RELEASE NO CHANGE	AM	7/2/75	LMM
C	CR/0 7624	AM	1/26/75	JL



PART NO. 301055-001 ASSY

NOTES UNLESS SPECIFIED	DRAWN	Handy	4-5-75
1. TOLERANCES XX± ANGULAR XXX± ±	CHECK		
APPR.			
MATERIAL			
2. BREAK ALL SHARP EDGES APPROX. .010			
3. MACH. SURFACES			
4. ALL DIMS IN INCHES			
FINISH			
MODEL No.	F & T		
SCALE	2:1	SIZE	C
NEXT ASSY		WEIGHT	
DO NOT SCALE THIS DRAWING		SHEET	2 OF 2

PERKIN-ELMER
Memory Products Division

ASSEMBLY, PWB-LINE TERMINATOR D31/33 MALE

CODE D120
QTY 1
REV. C

3. FOR SCHEMATIC REF DWG 301056.
 2 COMPONENTS SHOWN IN PHANTOM LINES ARE NOT USED.
 1 MARK APPROPRIATE DASH NUMBER, S/N AND LATEST REVISION LETTER, 12 HIGH WHITE CHARACTERS PER P-E SPEC 100037.
 NOTES: UNLESS OTHERWISE SPECIFIED

FORM 209 (5/74)

8 7 6 5 4 3 2 1

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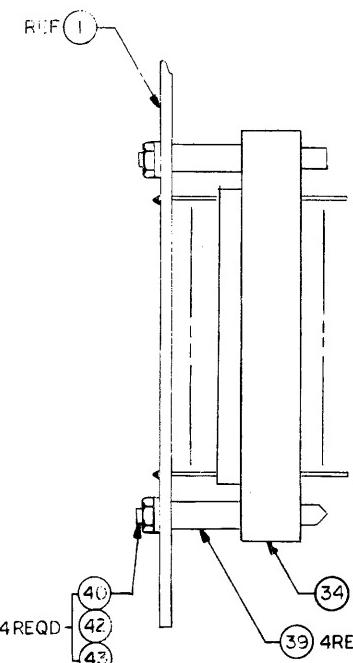
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A

3. APPLY LOCTITE (ITEM 44) TO INTERNAL THREADS OF NUT OF JACKSCREW.
 2. FOR SCHEMATIC REF SEE 301063
 1. MARK LATEST REVISION LETTER, APPROPRIATE DASH NO.,
 AND S/N, 12 HIGH WHITE CHARACTERS PER WANGCO
 SPEC 100037.
 NOTES: UNLESS OTHERWISE SPECIFIED



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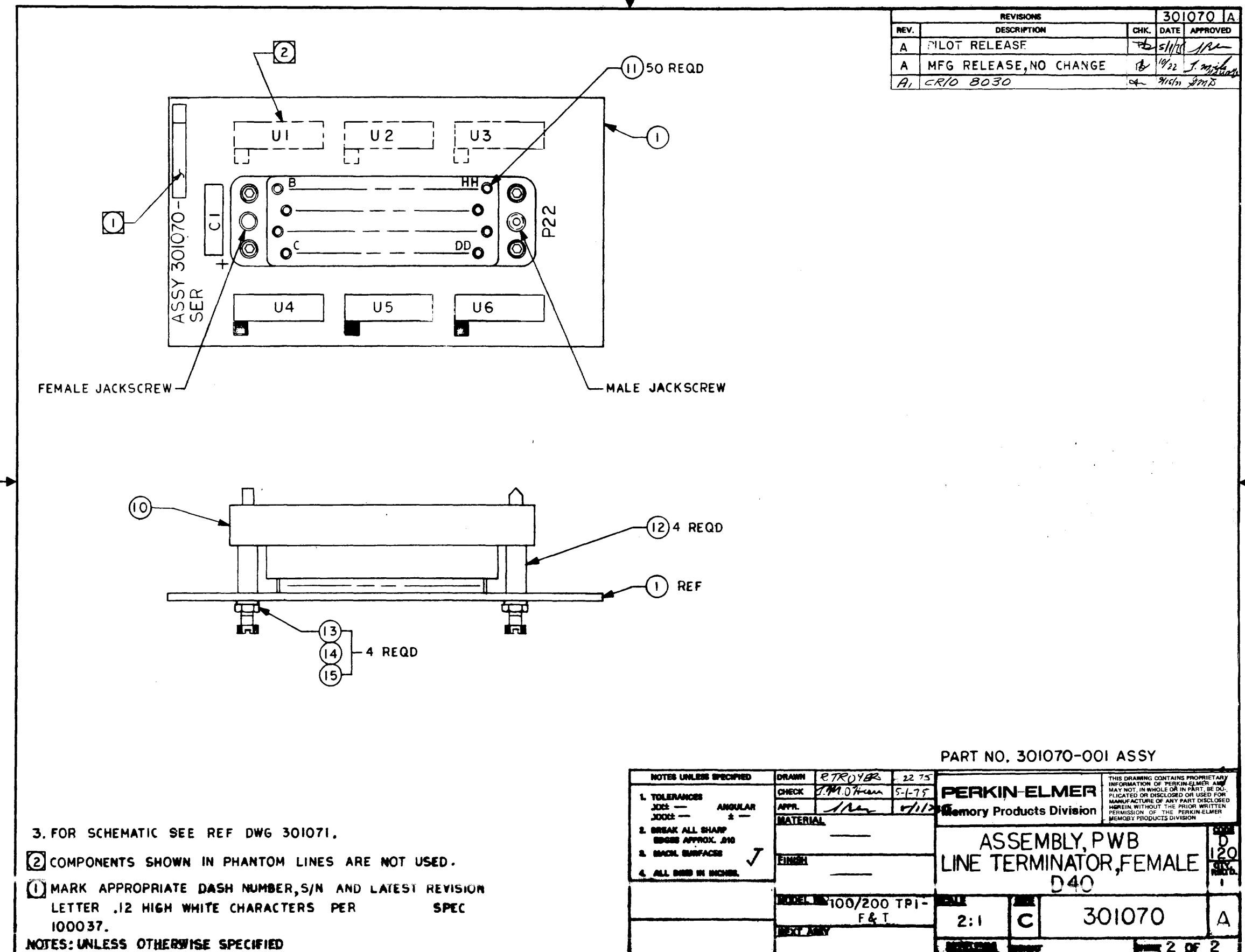
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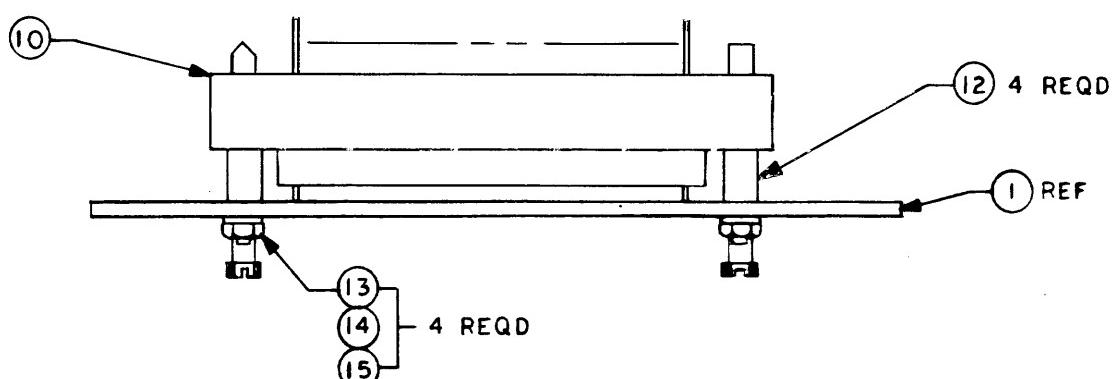
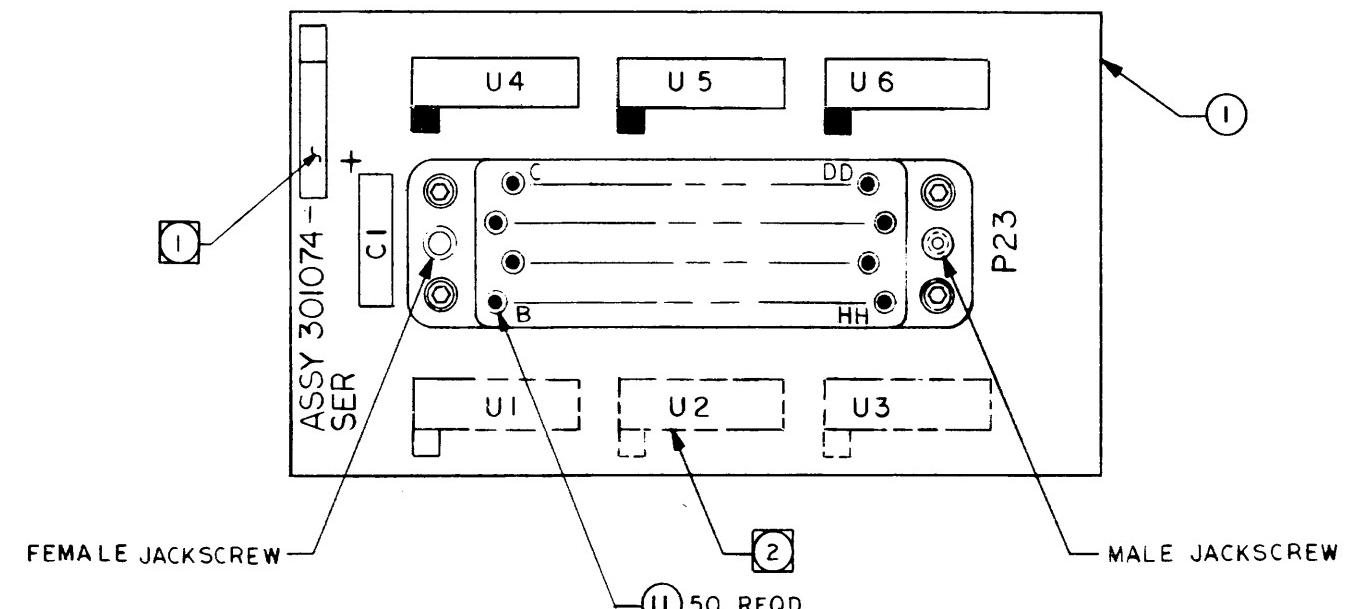
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REV.	PERKIN ELMER	MATERIAL LIST			DRAWING NO.	REV.	
	Memory Products Division				ML	301062-000	C
DRAWING NO.	DRAWING TITLE	ASSY. PWB I/O CONNECTOR D31/33	(SF&ST 100TPI Only)	MODEL NO. (F&T)	DATE 11/27/74	SHEET 1	OF 3
Item No.	Drawing Title	Dwg. No.	Rev.	Qty.	Remarks on Ckt. Desig.		
1	Board, Processed.	301061-001	C	1			
2							
3							
4	I.C. 7402	100329-001			U19.		
5	I.C. 8T380 or 8836	100347-001		5	U2,U3,U4,U5,U6.		
6	I.C. 75452	101031-001		10	U7, U8, U9, U10, U11, U12,		
7					U13, U14, U16, U17.		
8	I.C. 7402	100332-001		2	U18, "1		
9	I.C. Resistor Network. 10K	142004-103		1	U15.		
10							
11							
12	Capacitor Cer. 20 .,100V.,.01uf	101042-103		8	C2,C3,C4,C5,C6,C7,C8,C9.		
13							
14	Capacitor Cer. 20 .,50V.,.1uf	101037-104		4	C10,C11,C12,C13.		
15	Capacitor Tant 10 .,20V.,.56uf	101002-566		1	C1.		
16							
17							
18							
19	Diode, Pectifier 1N4003	100127-001		2	CR1,CP2.		
20							
21							
22							
23	Resistor, 5 .,W. 2K	101156-202		3	R3,R4,R5.		
24	Resistor, 5 .,W. 10K	-103		3	R2,R6,R7.		
25	Resistor, 5 .," 75	101156-750		1	R1.		
26							
27							
28							
29	Switch, Rotary Selector.	149004-001		2	S1,S2.		
30							
31	Pin, Wire Wrap.	100360-003		19	Jumper Points. A,B,C,D,E,F, G,H,J,K,L,M,N,P,R,S,T,U,V,X		
32							

REVISIONS			
REV.	DESCRIPTION	CHK.	DATE APPROVED
A	PILOT RELEASE	FB	5/1/75 J.R.L.
A	MFG RELEASE, NO CHANGE	FB	10/22 J.M.J.
A	CR10 8030	FB	High GMD



REVISIONS			
REV.	DESCRIPTION	CHK.	DATE APPROVED
A	PILOT RELEASE	BB	5/1/75 J. O'Hea
A	MFG RELEASE, NO CHANGE	BB	10/22 J. O'Hea
B	CR/O 6119	BB	11/15 J. M. O'Hea
C	CR/O 7922	BB	11/11 H.F.
C1	CR/O 8342	BB	2-7-78 C.A.C.



3. FOR SCHEMATIC SEE REF DWG 301075.
 2 COMPONENTS SHOWN IN PHANTOM LINES ARE NOT USED.
 1 MARK APPROPRIATE DASH NUMBER, S/N AND LATEST REVISION LETTER .12 HIGH WHITE CHARACTERS PER 100037.
 NOTES: UNLESS OTHERWISE SPECIFIED

NOTES UNLESS SPECIFIED	DRAWN	P. TR. 5-75
1. TOLERANCES JOGS — ANGULAR JOGS — ±	CHECK	J. O'Hea 5-1-75
2. BREAK ALL SHARP EDGES APPROX. .010	APPR.	J. M. O'Hea 5-1-75
3. MACH SURFACES ✓	MATERIAL	
4. ALL DIMS IN INCHES	FINISH	
	MODEL	100/200 TPI F & T
	SCALE	2:1
	SIZE	C
	301074	C1
DO NOT SCALE THIS DRAWING	WEIGHT	2 OF 2

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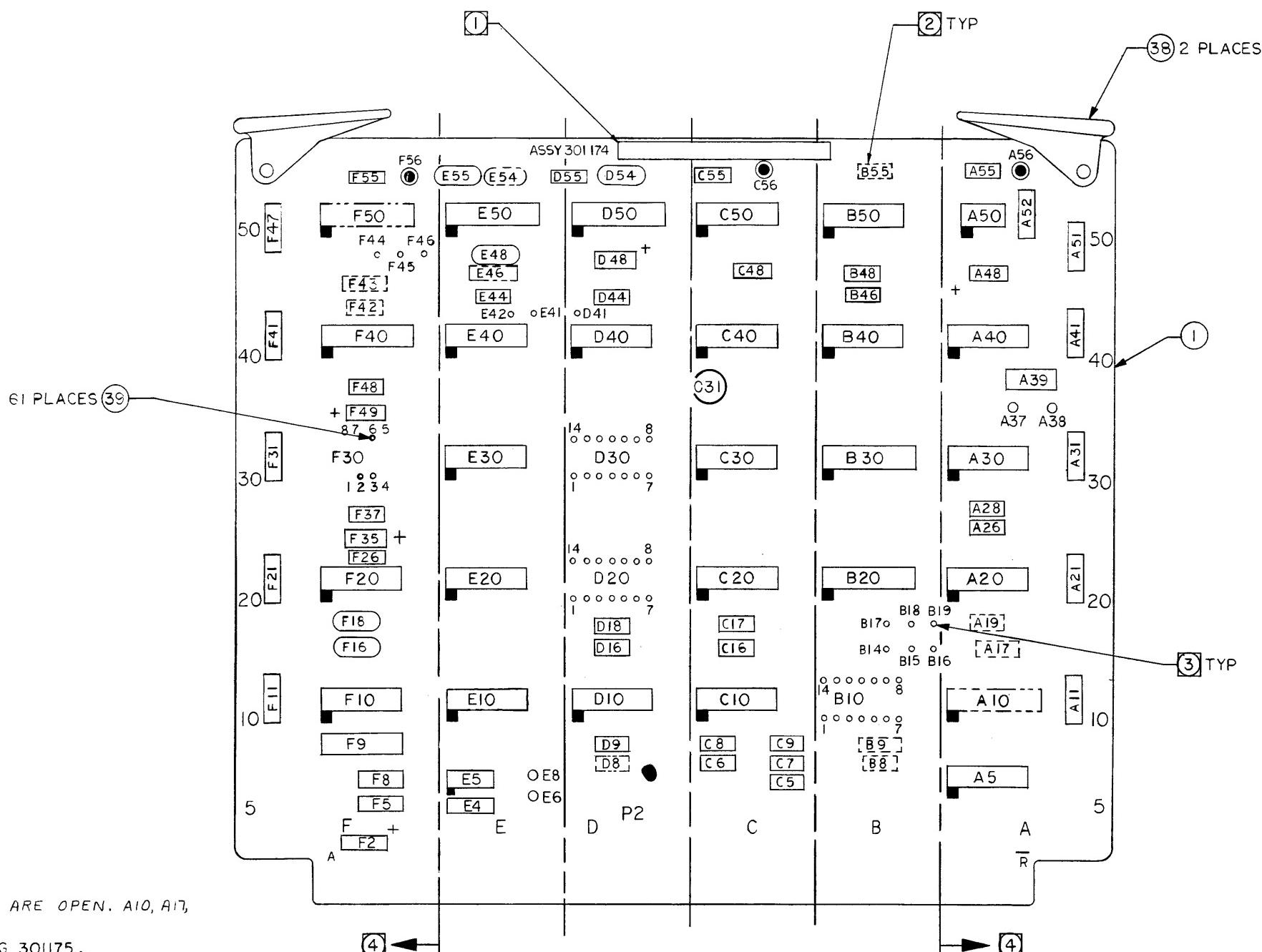
PERKIN-ELMER Memory Products Division

ASSEMBLY, PWB LINE TERMINATOR, MALE D40

PART NO. 301074-001 ASSY

8 | 7 | 6 | 5 | 4 | 3 | 2 | 1

D



6. THE FOLLOWING LOCATIONS ARE OPEN. A10, A17,
A19, B8, B9, F42, F43, F50.

5. FOR SCHEMATIC REF SEE DWG 301175.

4. MAX. HEIGHT OF ALL COMPONENTS WITHIN AREA OF DOTTED
LINES TO BOARD EDGE SHALL BE 5/16 MAX. DISC TYPE
CAPACITORS MOUNTED IN THIS AREA SHALL BE ASSEMBLED
LEANING AWAY FROM EDGES OF BOARD.

3. FOR JUMPER LOCATIONS SEE M/L.

2. COMPONENTS SHOWN IN PHANTOM ARE VARIABLE.
SEE M/L FOR VALUES.

1. MARK APPROPRIATE DASH NUMBER, S/N, AND LATEST REVISION
LETTER .J2 HIGH CHARACTERS COLOR WHITE, PER P-E
SPEC 100037.

NOTES: UNLESS OTHERWISE SPECIFIED

PART NUMBER 301174 - XXX ASSY SEE TABULATED M/L

NOTES UNLESS SPECIFIED	DRAWN	Ser. 124475
1. TOLERANCES \pm ANGULAR \pm	CHECK	124475
2. IMPROV. AT SHARP EDGES APPROX. 0.10	APPR.	1-23-76
3. MACH. SURFACES	MATERIAL	
4. ALL DIMS IN INCHES.	FINISH	
5. DIMENSIONS APPLY AFTER FINISH AND HEAT TREAT	MODEL NO.	SF-ST
	NEXT ASSY	
DO NOT SCALE THIS DRAWING	SCALE	2:1
	SIZE	D
	CHARTED	E
	WEIGHT	
	SHEET	3 OF 3

PERKIN-ELMER
Memory Products Division

ASSEMBLY, PWB -
CONTROL INTERFACE

REV.		PERKIN ELMER		MATERIAL LIST		PART NUMBER		CODE	
		Memory Products Division						D120	
						301174-000		E	
TITLE		ASSY. PWB. CONTROL INTERFACE.		MODEL SF, ST		DATE 10/3/75		SHEET 1 OF 2	
ITEM NO.		DESCRIPTION		PART NO.		REQD	REV.	ACT. REV.	REMARKS
						NEXT ASSEMBLY/USED ON			
1		Board, Processed.		301173-001		1			
2									
3		I.C.		555		101023-001	1		A50.
4		I.C.		74L500		123029-001	1		A30.
5		I.C.		74LS02		123030-001	1		D40.
6		I.C.		74LS04		123031-001	2		A5, F10.
7		I.C.		74LS08		123032-001	5		A40,C10,C50,E40,F20.
8		I.C.		74LS32		123035-001	1		E20.
9		I.C.		74LS74		123036-001	4		A20,B50,F30,F10
10		I.C.		74LS86		123038-001	1		D10.
11		I.C.		74LS123		123039-001	3		D50,F50,F40.
12		I.C.		74LS157		123040-001	2		B20,B30.
13		I.C.		74LS293		123042-001	4		B40,C20,C30,C40.
14		I.C.		75452		101031-001	1		E5
15		Diode		1N4003		100127-001	2		F5,8
16		Capacitor, Mica.		100pf		100243-101	2		D54,E48
17		Capacitor,		200pf		-201	3		E55,F16,F18.
18		Capacitor, Poly.		.0015uf		101005-152	1		F49
19									
20		Capacitor, Ceramic		50V .01uf		101042-103	11		A11,A21,A31,A41,A51,A52,F11
21		Capacitor, Tant.		35V 1uf		101003-105	1		F21,F31,F41,F47
22		Capacitor,		20V 2.2uf		101002-225	1		F48.
23		Capacitor,		20V 15uf		-156	1		F35.
24		Capacitor,		6V 56uf		101001-566	1		F2.
25		Resistor, Variable		10K		101148-103	1		A48.
26		Resistor, 3 ,3W.		45		101084-022	1		C31
27		Resistor, 5%, 1/2W.		75		101156-750	7		F9
28									
29		Resistor, "		1K		-102	4		A26,B48,D55,F26.
30		Resistor, "		5.1K		-512			D44
31		Resistor, "		7.5K		-752			C55

FORM 209 (R.12/74)

REV.		PERKIN ELMER		MATERIAL LIST		PART NUMBER		CODE	
		Memory Products Division						D120	
						301174-000		E	
TITLE		ASSY. PWB. CONTROL INTERFACE		MODEL SF, ST		DATE 1/23/76		SHEET 2 OF 2	
ITEM NO.		DESCRIPTION		PART NO.		REQD	REV.	ACT. REV.	REMARKS
						NEXT ASSEMBLY/USED ON			
32		Resistor, 5%, 1/2 W.		10K		101156-103	9	A28, B46, C48, D9,D16, D18, E44, F55, E4	
33		Resistor, " "		20K		-203	2	F48, A39	
34									
35		Resistor, " "		240K		-244	1	F37	
36		Resistor, " "		2.0 meg		-205	1	A55	
37									
38		Extractor, Card.		107901-001		2			
39		Pin, Wire Wrap.		100360-001		64		B10-1,2,3,4,5,6,7,8,9,10,11 12,13,14,B14,B15,B16,B17, B18,B19,D20-1,2,3,4,5,6,7,8, 9,10,11,12,13,14,D30-1,2,3, 4,5,6,7,8,9,10,11,12,13,14, F30-2,3,6,E6,8,A37,38,56	
40								F44, 45, 46, D41, E41, 42, C56, F56	
41		Schematic		301175-001		0			
42		Printed Master.		301172-001		0			
43		Specification		301437-001		0			
44		Test Procedure		900106-001		0			
45		Test Specification		900107-001		0			

FORM 209 (R.12/74)

REV.		PERKIN ELMER		MATERIAL LIST		PART NUMBER		CODE	
		Memory Products Division						D120	
						301174-001		G	
TITLE		ASSY. PWB. CONTROL INTERFACE		MODEL SF, ST		DATE 1-13-76		SHEET 1 OF 1	
ITEM NO.		DESCRIPTION		PART NO.		REQD	REV.	ACT. REV.	REMARKS
						NEXT ASSEMBLY/USED ON			
46		USE MATERIAL LIST		301174-000		11		NEXT ASSEMBLY/USED ON	
47		AND ADD THE FOLLOWING:							
50									
51		Capacitor, Poly		.001uf		101005-102	1	E54	
52		Capacitor, Poly		.0068uf		101004-682	1	E46	
53									
54									
55									
56									
57		Jumper, Insulated		300648-001		20		Jumper A37 to A38 B14 to B15 B17 to B18 B10-1 to B10-7 B10-6 to B10-14 B10-9 to B10-10 B10-11 to B10-12 D20-1 to D20-14 D20-3 to D20-12 D20-5 to D20-10 D20-6 to D20-9 D20-7 to D20-8 D30-1 to D30-14 D30-3 to D30-13 D30-6 to D30-7 D30-8 to D30-10 D30-9 to D30-11 F30-3 to F30-6 D41 to E41 F45 to F46	

FORM 209 (R.12/74)

REV.		PERKIN ELMER		MATERIAL LIST		PART NUMBER		CODE	
		Memory Products Division						D120	
						301174-101		H	
TITLE		ASSY. PWB. CONTROL INTERFACE		MODEL SF & ST		DATE 5-21-76		SHEET 1 OF 1	
ITEM NO.		DESCRIPTION		PART NO.		REQD	REV.	ACT. REV.	REMARKS
						NEXT ASSEMBLY/USED ON			
58		USE MATERIAL LIST		301174-000		11		NEXT ASSEMBLY/USED ON	
59		AND ADD THE FOLLOWING:							
60									
61		Capacitor, Poly		.001uf		101005-102	1	E54	
62		Capacitor, Poly		.0068uf		101004-682	1	E46	
63									
64									
65									
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C300/200 NO SECTOR COUNTER - INDIVIDUAL LINES-WRITE INHIBIT

MATERIAL LIST		PART NUMBER	REV.			
PERKIN-ELMER Memory Products Division		301174-106	/			
200 TPI SF & ST DATE 5-21-76 SHEET 1 OF 1						
ITEM NO.	DESCRIPTION	PART NO.	REQD REV.	ACT. REV.	REMARKS	
	USE MATERIAL LIST AND ADD THE FOLLOWING:	301174-000	/	/	NEXT ASSEMBLY/USED ON	
50						
51	Capacitor, Poly .001uf	101005-102	1	E54		
52	Capacitor, Poly .0068uf	101004-682	1	E46		
53						
54						
55						
56						
57	Jumper, Insulated	300648-001	20	Jumper A37 to A38 B14 to B15 B17 to B18 B10-1 to B10-5 B10-6 to B10-2 B10-9 to B10-8 B10-13 to B10-12 D20-1 to D20-14 D20-3 to D20-11 D20-5 to D20-10 D20-6 to D20-9 D20-7 to D20-8 D30-2 to D30-14 D30-3 to D30-13 D30-4 to D30-7 D30-8 to D30-10 D30-9 to D30-11 F30-2 to F30-6 D41 to E41 F45 to F46		

FORM 209 (R12/74)

D-40 NO SECTOR COUNTER - INDIVIDUAL LINES WRITE INHIBIT

MATERIAL LIST		PART NUMBER	REV.			
PERKIN-ELMER Memory Products Division		301174-107	/			
200TPI SF&ST DATE 5-21-76 SHEET 1 OF 1						
ITEM NO.	DESCRIPTION	PART NO.	REQD REV.	ACT. REV.	REMARKS	
	USE MATERIAL LIST AND ADD THE FOLLOWING:	301174-000	/	/	NEXT ASSEMBLY/USED ON	
50						
51						
52						
53						
54						
55						
56						
57	Jumper, Insulated	300648-001	20	Jumper A37 to A38 B14 to B15 B17 to B18 B10-1 to B10-5 B10-6 to B10-2 B10-9 to B10-8 B10-13 to B10-12 D20-1 to D20-14 D20-3 to D20-12 D20-5 to D20-10 D20-6 to D20-9 D20-7 to D20-8 D20-13 to D20-14 D30-1 to D30-14 D30-3 to D30-13 D30-6 to D30-7 D30-8 to D30-10 D30-9 to D30-11 F30-3 to F30-6 D41 to E41 F45 to F46		

FORM 209 (R12/74)

D-40 PULSE ILL. ADD. SECTOR COUNTER MULTIPLEXED WRITE INHIBIT

MATERIAL LIST		PART NUMBER	REV.			
PERKIN-ELMER Memory Products Division		301174-109	/			
200TPI SF&ST DATE 5-21-76 SHEET 1 OF 1						
ITEM NO.	DESCRIPTION	PART NO.	REQD REV.	ACT. REV.	REMARKS	
	USE MATERIAL LIST AND ADD THE FOLLOWING:	301174-000	/	/	NEXT ASSEMBLY/USED ON	
50						
51						
52						
53						
54						
55						
56						
57	Jumper, Insulated	300648-001	20	Jumper A37 to A38 B14 to B15 B17 to B18 B10-1 to B10-7 B10-6 to B10-14 B10-9 to B10-10 B10-11 to B10-12 D20-1 to D20-14 D20-3 to D20-12 D20-6 to D20-9 D20-7 to D20-8 D30-1 to D30-14 D30-3 to D30-13 D30-6 to D30-7 D30-8 to D30-10 D30-9 to D30-11 F30-3 to F30-6 D41 to E41 F45 to F46		

FORM 209 (R12/74)

D-40 SECTOR COUNTER MULTIPLEXED WRITE INHIBIT

MATERIAL LIST		PART NUMBER	REV.			
PERKIN-ELMER Memory Products Division		301174-111	/			
200TPI SF&ST DATE 5-21-76 SHEET 1 OF 1						
ITEM NO.	DESCRIPTION	PART NO.	REQD REV.	ACT. REV.	REMARKS	
	USE MATERIAL LIST AND ADD THE FOLLOWING:	301174-000	/	/	NEXT ASSEMBLY/USED ON	
50						
51						
52						
53						
54						
55						
56						
57	Jumper, Insulated	300648-001	19	Jumper A37 to A38 B14 to B15 B17 to B18 B10-1 to B10-7 B10-6 to B10-14 B10-9 to B10-10 B10-11 to B10-12 B10-13 to B10-12 D20-1 to D20-14 D20-3 to D20-13 D20-5 to D20-10 D20-6 to D20-9 D20-7 to D20-8 D20-13 to D20-14 D30-1 to D30-14 D30-3 to D30-13 D30-6 to D30-7 D30-8 to D30-10 D30-9 to D30-11 F30-3 to F30-6 D41 to E41 F45 to F46		

FORM 209 (R12/74)

D-40 SECTOR COUNTER MULTIPLEXED NEGATIVE ATTENTION

MATERIAL LIST		PART NUMBER	REV.			
PERKIN-ELMER Memory Products Division		301174-112	/			
SF & ST DATE 5-24-76 SHEET 1 OF 1						
ITEM NO.	DESCRIPTION	PART NO.	REQD REV.	ACT. REV.	REMARKS	
	USE MATERIAL LIST AND ADD THE FOLLOWING:-	301174-000	/	/	NEXT ASSEMBLY/USED ON	
50						
51						
52						
53						
54						
55						
56						
57	Jumper, Insulated	300648-001	19	Jumper A37 to A38 B14 to B15 B17 to B18 B10-1 to B10-7 B10-6 to B10-14 B10-9 to B10-10 B10-11 to B10-12 D20-1 to D20-14 D20-3 to D20-12 D20-6 to D20-9 D20-7 to D20-8 D30-1 to D30-14 D30-3 to D30-13 D30-6 to D30-7 D30-8 to D30-10 D30-9 to D30-11 F30-3 to F30-6 D41 to E41 F45 to F46		

FORM 209 (R12/74)

SPECIAL: SFENA

MATERIAL LIST		PART NUMBER	REV.			
PERKIN-ELMER Memory Products Division		301174-114	/			
ASSY., PWB. CONTROL INTERFACE MODEL SF, 200 TPI DATE 12/21/76 SHEET 1 OF 1						
ITEM NO.	DESCRIPTION	PART NO.	REQD REV.	ACT. REV.	REMARKS	
	USE MATERIAL LIST AND ADD THE FOLLOWING:-	301174-000	/	/	NEXT ASSEMBLY/USED ON	
50						
51	Capacitor, Mica 100pf	100243-101	1	E54		
52	Capacitor, Mica 470pf	-471	1	E46		
53						
54						
55						
56						
57	Jumper, Insulated	300648-001	19	Jumper A37 to A38 B14 to B15 B17 to B18 B10-1 to B10-7 B10-6 to B10-14 B10-9 to B10-10 B10-11 to B10-12 D20-1 to D20-14 D20-3 to D20-12 D20-6 to D20-9 D20-7 to D20-8 D30-2 to D30-14 D30-3 to D30-13 D30-6 to D30-7 D30-8 to D30-10 F30-3 to F30-6 D41 to E41 F45 to F46		

FORM 209 (R12/74)

SECTOR COUNTER MULTIPLEXED WRITE INHIBIT (SPECIAL T-A)

MATERIAL LIST		PART NUMBER	REV.			
PERKIN-ELMER Memory Products Division		301174-115	/			
200 TPI SF & ST DATE 2-9-77 SHEET 1 OF 1						
ITEM NO.	DESCRIPTION	PART NO.	REQD REV.	ACT. REV.	REMARKS	
	USE MATERIAL LIST AND ADD THE FOLLOWING:	301174-000	/	/	NEXT ASSEMBLY/USED ON	
50						
51	Capacitor, Poly .001uf	101005-102	1	E54		
52	Capacitor, Poly .0068uf	101004-682	1	E46		
53						
54						
55						
56						
57	Jumper, Insulated	300648-001	20	Jumper A37 to A38 B14 to B15 B17 to B18 B10-1 to B10-7 B10-6 to B10-14 B10-9 to B10-10 B10-11 to B10-12 B10-13 to B10-12 D20-1 to D20-14 D20-3 to D20-11 D20-6 to D20-10 D20-7 to D20-9 D20-7 to D20-8 D30-2 to D30-14 D30-3 to D30-12 D30-4 to D30-7 D30-8 to D30-10 F30-3 to F30-6 D41 to E41 F45 to F46		

FORM 209 (R12/74)

SPECIAL: CTM
D-30 NO SECTOR COUNTER-INDIVIDUAL LINES WRITE INHIBIT

MATERIAL LIST		PART NUMBER	REV.			
PERKIN-ELMER Memory Products Division		301174-120	/			
200 TPI SF & ST. DATE SHEET 1 OF 1						
ITEM NO.	DESCRIPTION	PART NO.	REQD REV.	ACT. REV.	REMARKS	
	USE MATERIAL LIST AND ADD THE FOLLOWING:	301174-000	/	/	NEXT ASSEMBLY/USED ON	
50						
51	Capacitor, Poly .001uf	101005-102	1	E54		
52	Capacitor, Poly .0068uf	101004-682	1	E46		
53						
54						
55						
56						
57	Jumper, Insulated	300648-001	20	Jumper A37 to A38 B14 to B15 B17 to B18 B10-1 to B10-5 B10-6 to B10-2 B10-9 to B10-8 B10-13 to B10-12 B10-1 to B10-14 B10-3 to B10-11 B10-6 to B10-10 B10-9 to B10-12 B10-11 to B10-13 B10-13 to B10-12 D20-1 to D20-14 D20-3 to D20-11 D20-6 to D20-10 D20-7 to D20-9 D20-7 to D20-8 D30-2 to D30-14 D30-3 to D30-12 D30-4 to D30-7 D30-6 to D30-12 D30-8 to D30-10 D30-9 to D30-11 F30-3 to F30-6 D41 to E41 F45 to F46		

FORM 209 (R12/74)

22

D-40 PULSE ILL. ADD. SECTOR COUNTER MULTIPLEXED READY INHIBIT					
		CODE 0120			
PERKIN ELMER Memory Products Division	MATERIAL LIST	PART NUMBER 301174-209	REV. <input checked="" type="checkbox"/>		
TITLE ASSY. PWB. CONTROL INTERFACE MODEL 200TPI SF & ST DATE 6-14-76 SHEET 1 OF 1					
ITEM NO.	DESCRIPTION	PART NO.	REQD REV. ACT. REV.		
NEXT ASSEMBLY USED ON					
USE MATERIAL LIST AND ADD THE FOLLOWING:					
50					
51					
52					
53					
54					
55					
56	A37 to A38				
57 Jumper, Insulated	300648-001	21	Jumper B14 to B15 B17 to B18 B10-1 to B10-7 B10-6 to B10-14 B10-9 to B10-10 B10-11 to B10-12 D20-3 to D20-12 D20-5 to D20-10 D20-6 to D20-9 D20-7 to D20-8 D20-13 to D20-14 D30-1 to D30-14 D30-3 to D30-13 D30-6 to D30-7 D30-8 to D30-10 D30-9 to D30-11 E6 to E8 F30-3 to F30-6 D41 to E41 F45 to F46		
APPROVED	DATE	REVIEWED	INITIALS		
301174-212					

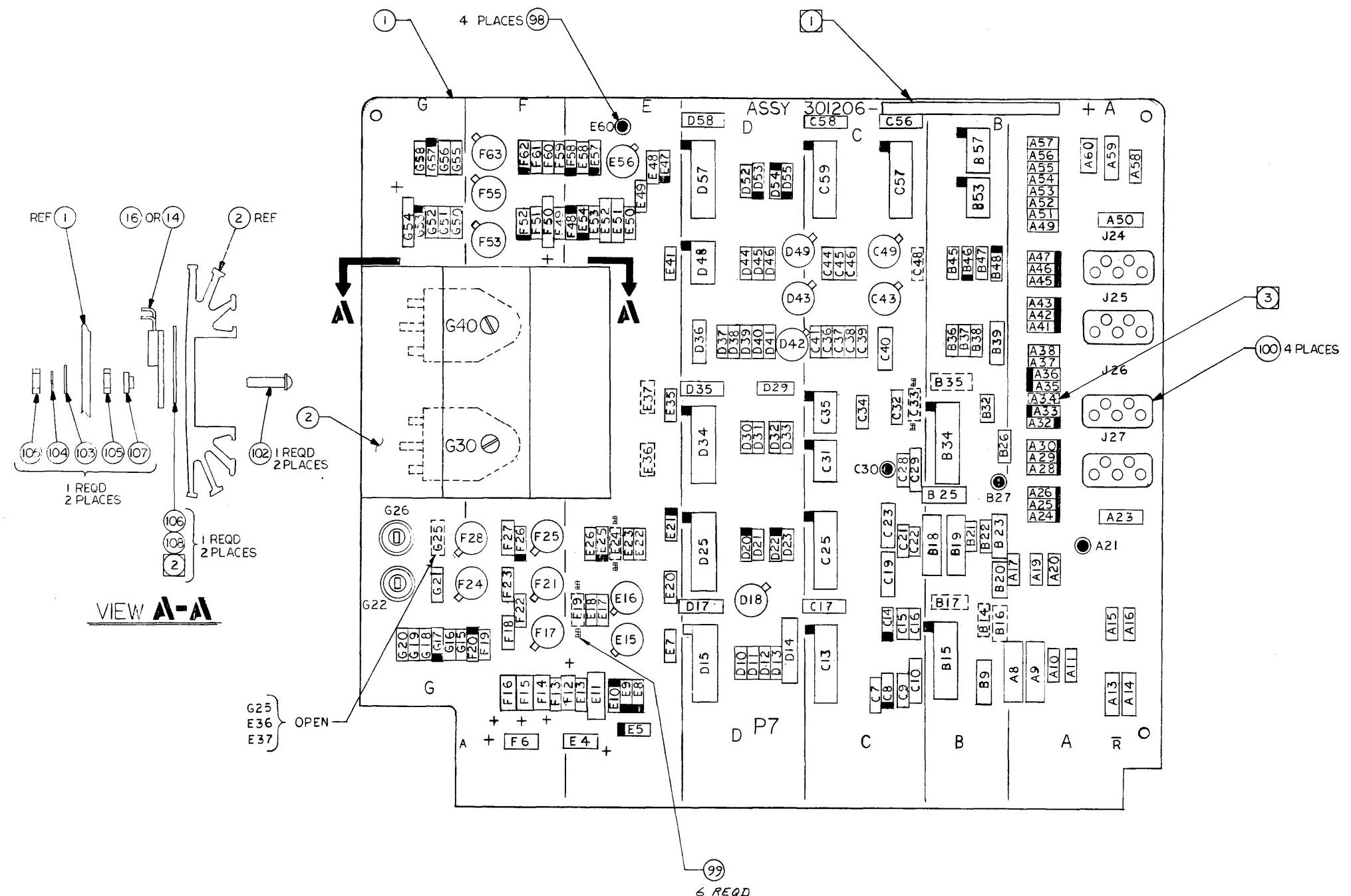
FORM 209 (R,12/74)

D-40 SECTOR COUNTER MULTIPLEXED NEGATIVE ATTENTION READY INHIBIT					
		CODE D120			
PERKIN ELMER Memory Products Division	MATERIAL LIST	PART NUMBER 301174-212	REV. <input checked="" type="checkbox"/>		
TITLE ASSY PWB. CONTROL INTERFACE MODEL SF & ST DATE 10-25-76 SHEET 1 OF 1					
ITEM NO.	DESCRIPTION	PART NO.	REQD REV. ACT. REV.		
NEXT ASSEMBLY USED ON					
USE MATERIAL LIST AND ADD THE FOLLOWING:					
50					
51					
52					
53					
54					
55					
56	A37 to A38				
57 Jumper, Insulated	300648-001	20	Jumper B14 to B15 B17 to B18 B10-1 to B10-7 B10-6 to B10-14 B10-9 to B10-10 B10-11 to B10-12 D20-1 to D20-14 D20-3 to D20-12 D20-5 to D20-9 D20-6 to D20-8 D20-7 to D20-13 D30-1 to D30-14 D30-3 to D30-13 D30-6 to D30-7 D30-8 to D30-10 D30-9 to D30-11 E6 to E8 F30-3 to F30-6 D41 to E41 F45 to F46		
APPROVED	DATE	REVIEWED	INITIALS		
301174-212					

FORM 209 (R,12/74)

8 7 6 5 4 3 2 1

REV.	DESCRIPTION	REVISIONS		APPROVED
		CHK.	DATE	
A	MFG RELEASE	26	7/26/69	Mr. Brown
B	CR/0 6764	26	7/26/69	
C	CR/0 6812	26	7/26/69	Fair
D	CR/0 7029	26	7/27/69	Mr. Brown
E	CR/0 7138	26	7/27/69	Mr. Brown
F	CR/0 7210	26	7/27/69	Mr. Brown
G	CR/0 7377	26	7/26/69	Mr. Brown
G1	CR/0 7661	EF	7/26/69	
H	CR/0 7838	26	7/28/69	Mr. Brown
I	CR/0 8049	26	7/28/69	Mr. Brown
J	CR/0 8191	26	7/28/69	Mr. Brown
K	CR/0 3615	26	7/28/69	Mr. Brown



PART NUMBER 301206-XXX SEE TABULATED M/L

NOTES UNLESS SPECIFIED		DRAWN <i>Drawn</i> / 10/27/75	PERKIN-ELMER Memory Products Division		
1. TOLERANCES XX± ANGULAR XXX± ±		CHECK <i>MCB</i>	THIS DRAWING CONTAINS PROPRIETARY INFORMATION OF PERKIN-ELMER AND MAY NOT BE COPIED OR REPRODUCED OR DISCLOSED OR USED FOR MANUFACTURE OF ANY PART DISCLOSED HEREIN. THIS DRAWING IS THE PROPERTY OF PERKIN-ELMER AND IS PROVIDED WITH PERMISSION OF THE PERKIN-ELMER MEMORY PRODUCTS DIVISION		
2. BREAK ALL SHARP EDGES APPROX 010		APPR. <i>MCB</i> / 04/06/76			
3. MACH. SURFACES		MATERIAL _____			
4. ALL DIMS IN INCHES.		ASSEMBLY, PWB, DATA ELECTRONICS			DI20
5. DIMENSIONS APPLY AFTER FINISH AND HEAT TREAT					GUY PRINTED 1
✓ FINISH _____		MODEL No. <i>SF/ST</i>	SCALE _____	SIZE <i>D</i>	301206 <i>K</i>
		NEXT ASSY <i>400000</i> <i>400001</i>	DO NOT SCALE THIS DRAWING	WEIGHT	SHEET 5 OF 5

4. FOR SCHEMATIC REF DWG 301207.

③ COMPONENTS OUTLINED IN PHANTOM TO RE VARIABLE
SEE M/L DASH VERSION FOR VALUES.

② APPLY SILICON GREASE TO BOTH SIDES OF MICA WASHER.

① MARK APPROPRIATE DASH NO. AND LATEST REVISION LETTER
WHERE SHOWN, .12 HIGH" CHARACTERS,COLOR WHITE PER P-E

NOTES: UNLESS OTHERWISE SPECIFIED

SPEC 10003

BASIC					
PART NUMBER	REV.	CODE D120			
PERKIN-ELMER Memory Products Division		MATERIAL LIST		PART NUMBER	REV.
				301206-000	K
ASSY. PWB. DATA ELECTRONICS.					
TITLE ASSY. PWB. DATA ELECTRONICS.		MODEL SF,ST	DATE 10/2/75.		SHEET 1 OF 5
ITEM NO.	DESCRIPTION	PART NO.	REQD	ACT. REV.	REMARKS
					NEXT ASSEMBLY/USED ON
1	Board, Processed.	301205-001	1	J	
2	Heat Sink	300135-001	1		
3	I.C.	311	101022-001	3	C31,C35,D48.
4	I.C.	592	101032-001	2	B15,B34.
5	I.C.	74LS00	123029-001	1	C25.
6	I.C.	7406	100331-001	1	D25.
7	I.C.	74LS14	123047-001	1	C57.
8	I.C.	74LS86	123038-001	1	D34.
9	I.C.	74S132	123067-001	1	D15.
10	I.C.	74S04	123046-001	1	C59.
11	I.C.	74S74	123023-001	1	D57.
12	I.C.	75452	101031-001	2	B53,B57.
13	I.C.	7808HC	125005-008	1	F24.
14	I.C.	7812HC	125006-012	1	G40.
15	I.C.	79M05UC	125007-005	1	F28.
16	I.C.	79M12UC	125008-012	1	G30.
17	I.C.	74LS02	123030-001	1	C13.
18					
19					
20	Transistor.	2N222A	101052-001	8	D18,D43,D49,E15,E56,F53,F55
					F63.
21					
22	Transistor.	2N2907A	101053-001	7	C43,C49,D42,E16,F17,F21,F25.
23					
24					
25	Diode, Rect.	1N4003	100127-001	3	F20,F26.,G17.
26					
27	Diode.	1N5317	101034-001	35	A24,A25,A26,A28,A29,A30,A32
					A33,A35,A36,A41,A42,A43,A45
					A46,A47,B46,B48,C8,C14,D53,
					D54,D55,D22,D20,E8,E9,E10,
					F48,F62,F58,E5,E47,E21,
					F52

FORM 209 (R.12/74)

BASIC					
PART NUMBER	REV.	CODE D120			
PERKIN-ELMER Memory Products Division		MATERIAL LIST		PART NUMBER	REV.
				301206-000	K
ASSY. PWB. DATA ELECTRONICS.					
TITLE ASSY. PWB. DATA ELECTRONICS.		MODEL SF,ST	DATE 10/2/75.		SHEET 2 OF 5
ITEM NO.	DESCRIPTION	PART NO.	REQD	MIN. ACT. REV.	REMARKS
					NEXT ASSEMBLY/USED ON
28					
29	Diode, Zener. 3.9V	IN5228B	101058-003	1	G57.
30	Diode, " 4.7V	IN5230B	-005	1	E57.
31	Diode, " 5.6V	IN5232 2%	107041-001	1	E25.
32	Diode, " 10V	IN5240B	101058-015	2	E54,G53.
33					
34					
35					
36	Capacitor, Mica.	62pf	100243-620	4	B20,B25,C19,C23.
37					
38					
39					
40	Capacitor, Ceramic .1ufd	101086-104	1	C7	
41	Capacitor, Ceramic .01uf	101042-103	20	A23,A50,A59,B9,,B39,C10, C17,C40,C29,C56,C58,D17,	
					D58,E51,E52,A13,A14,B26,D75
42					D29.
43	Capacitor. .022uf	101004-223	4	A8,A9,B18,B19,	
44	Capacitor. .039uf	-393	1	D14	
45	Capacitor. .047uf	101086-473	5	G21,G32,F18,F23,F27.	
46					
47	Capacitor, Tant. 20V 2.2uf	101002-225	4	A60,F14,F15,F16	
48	Capacitor, " 50V 3.3uf	100284-335	1	F12.	
49	Capacitor, " 35V 1uf	101003-105	2	E4,F6.	
50	Capacitor, " 20V 15uf	101002-156	2	F50,654	
51					
52					
53	Inductor. 1uh	101074-010	1	B32.	
54	Inductor. 27uh	-270	2	B21,C22.	
55	Inductor. 220uh	122500-001	1	E11.	
56					
57					
58					
59					
60					

FORM 209 (R.12/74)

BASIC					
PART NUMBER	REV.	CODE D120			
PERKIN-ELMER Memory Products Division		MATERIAL LIST		PART NUMBER	REV.
				301206-000	K
ASSY. PWB. DATA ELECTRONICS.					
TITLE ASSY. PWB. DATA ELECTRONICS.		MODEL SF,ST	DATE 10/2/75.		SHEET 3 OF 5
ITEM NO.	DESCRIPTION	PART NO.	REQD	MIN. ACT. REV.	REMARKS
					NEXT ASSEMBLY/USED ON
61					
62					
63	Resistor, Variable. 2K	138000-202	2	G26,G22	
64	Resistor, 5%, 1/2W	47	-470	1	C38
65	Resistor, 5%, 1/2W	10	101156-100	7	B36,B37,C46,F19,F51,G20,F22
66	Resistor, 5% 1/2W.	33	-330	1	C39
67	Resistor, " "	56	-560	5	A58,D44,D45,G56,G58.
68	Resistor, " "	100	-101	1	B38
69	Resistor, " "	120	-121	1	D21.
70	Resistor, " "	150	-151	2	A10,A11.
71	Resistor, " "	270	-271	4	G15,G16,G18,G19.
72	Resistor, " "	390	-391	3	C44,C45,E58.
73	Resistor, " "	430	-431	1	G52.
74	Resistor, " "	470	-471	5	B22,C15,C16,C21,G51.
75	Resistor, " "	560	-561	1	D39.
76	Resistor, " "	680	-681	4	D38,E13,E18,F13
77	Resistor, " "	820	-821	1	D32.
78	Resistor, " "	1K	-102	8	E23.,E35,D12,D10,
79	Resistor, " "	12K	101156-123	2	G50,G55,A15,A16
80	Resistor, 5% 1/2W.	1.5K	101156-152	4	A20,C28,D46,B23
81	Resistor, " "	2.2K	-222	6	A17,A19,C9,D30,D31,D52,F48
82	Resistor, " "	2.7K	-272	2	E26,F49
83	Resistor, " "	5.1K	-512	2	D11,E7.
84	Resistor, " "	7.5K	-752	2	E17,D13
85	Resistor, " "	10K	-103	16	A37,A38,A49,A53,A57,B45,
86	Resistor, 5% 1/2W.	12K	101156-123	2	B47,C36,C41,C34,E53
87	Resistor, " "	30K	-303	1	F59,F60,A54,D41,E49
88	Resistor, " "	39K	-393	1	D23,E22.
89	Resistor, " "				D36

FORM 209 (R.12/74)

BASIC					
PART NUMBER	REV.	CODE D120			
PERKIN-ELMER Memory Products Division		MATERIAL LIST		PART NUMBER	REV.
				301206-000	K
ASSY. PWB. DATA ELECTRONICS.					
TITLE ASSY. PWB. DATA ELECTRONICS.		MODEL SF,ST	DATE 10/2/75.		SHEET 4 OF 5
ITEM NO.	DESCRIPTION	PART NO.	REQD	MIN. ACT. REV.	REMARKS
					NEXT ASSEMBLY/USED ON
90	Resistor, 5%, 1/2W.	43K	101156-433	1	E41.
91	Resistor, " "	68K	-683	2	E50,D40
92	Resistor, " "	100K	-104	5	A51,A52,A55,A56,F61.
93	Resistor, " "	3K	-302	1	C37
94	Resistor, 5%, 1/2W	510K	-514	1	E20
95					
96	Pin, Wire Wrap	100360-001	4	A21,B27,C30,E60	
97	Pin	100377-002	6	E19,24,C33	
98	Connector.	101133-001	4	J24,J25,J26,J27.	
99					
100	Screw, Pan Hd.	100036-208	2	4-40 X 1/2	
101	Washer.	100047-200	2	No. 4.	
102	Washer, Spring Lock.	100042-200	2	No. 4.	
103	Nut.	100043-200	4	4-40.	
104	Insulator, Mica.	100147-001	2	Use with G30, G40.	
105	Washer, Nylon Shoulder.	100063-014	2	Use with G30, G40.	
106	Silicon Grease.	120100-001	A/R	Apply to both sides of item. 106.	
107					
108					

FORM 209 (R.12/74)

BASIC					
PART NUMBER	REV.	CODE D120			
PERKIN-ELMER Memory Products Division		MATERIAL LIST		PART NUMBER	REV.
				301206-001	K
Assy. Pwb. Data Electronics					
TITLE Assy. Pwb. Data Electronics		MODEL 200 TPI SF,ST	DATE 10/2/75.		SHEET 1 OF 1

PART NUMBER	REV.	MATERIAL LIST			
		PART NUMBER	REV.	PART NUMBER	REV.
PERKIN-ELMER Memory Products Division		301206-006	K		
ASSY. PWB. DATA ELECTRONICS TITLE 2200 BPI - 2400 RPM		MODEL 100 TPI, SF, ST DATE 3-12-76 SHEET 1 OF 1			
ITEM NO.	DESCRIPTION	PART NO.	REQD	ACT. REV.	REMARKS
USE MATERIAL LIST AND ADD THE FOLLOWING:					
				NEXT ASSEMBLY/USED ON 400000 & 400001	
110	Resistor, 1%, 1W	302075-002	1	E24. Test Select (150 to 243)	
111	Resistor, 1%, 1W	302075-003	1	E19. Test Select (316 to 825)	
112	Resistor, 5%, 1W	1.8K	101156-182	1	C48.
113	Resistor, 5%, 1W	3K	101156-302	1	A34.
114	Resistor, 5%, 1W	330	101156-331	1	B14.
115	Capacitor, Mica	68pf	100243-680	1	B16.
116	Capacitor, Mica	100pf	100243-101	1	B17.
117	Capacitor, Mica	15pf	100243-150	1	B35.
118	Resistor	302075-001	1	C33. test select(1.00 to 50A)	
C-2					

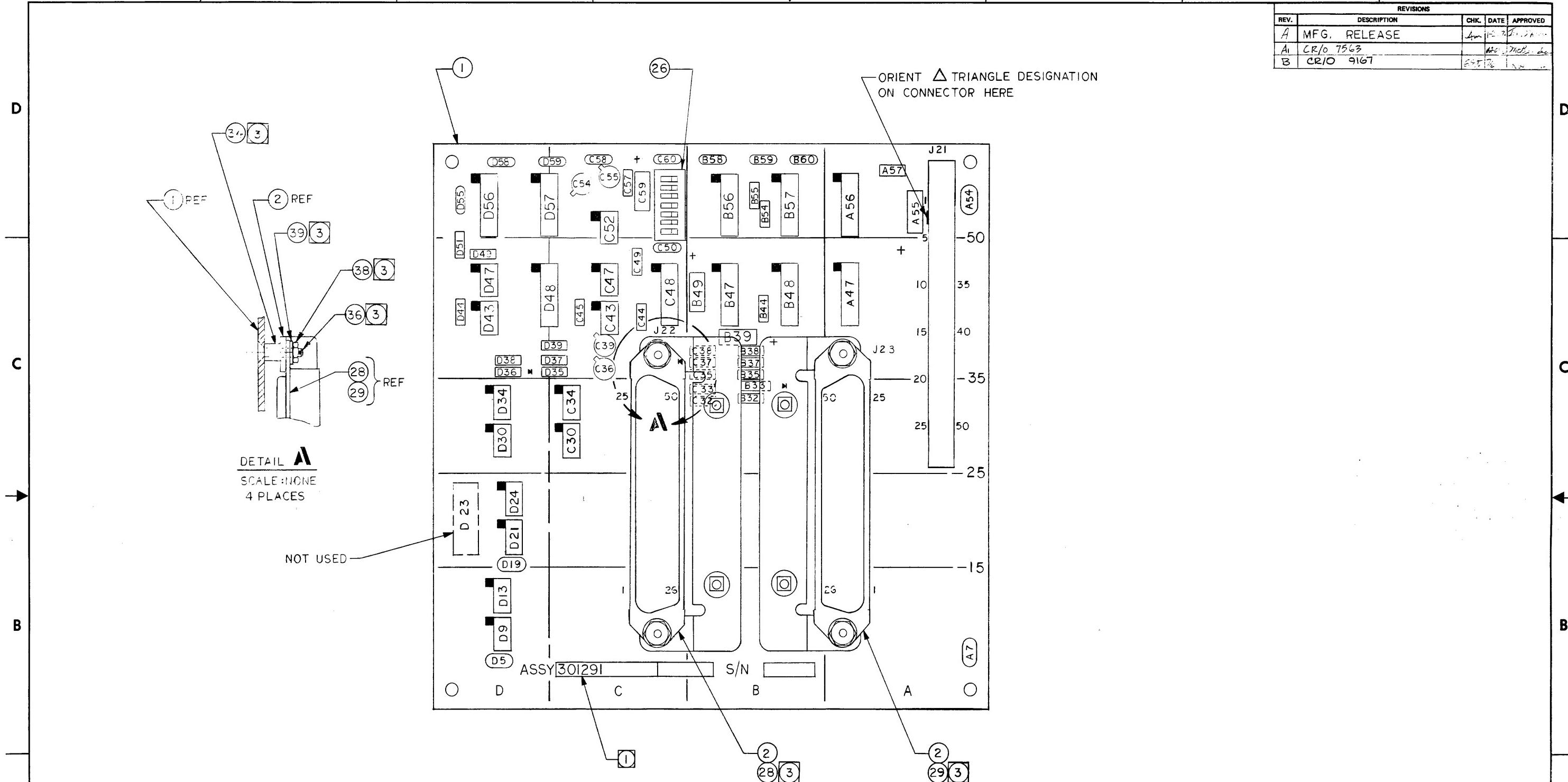
FORM 209 (R.12/74)

PART NUMBER	REV.	MATERIAL LIST			
		PART NUMBER	REV.	PART NUMBER	REV.
PERKIN-ELMER Memory Products Division		301206-008	G		
ASSY. PWB. DATA ELECTRONICS TITLE 2200 BPI - 2400 RPM		MODEL 200TPI SF&ST DATE 5-26-76 SHEET 1 OF 1			
ITEM NO.	DESCRIPTION	PART NO.	REQD	ACT. REV.	REMARKS
USE MATERIAL LIST AND ADD THE FOLLOWING:					
				NEXT ASSEMBLY/USED ON 400000	
110	Resistor, 1%, 1W.	302075-004	1	E24. test select(127 to 154A)	
111	Resistor, 1%, 1W.	302075-005	1	E19. test select(287 to 1.1K)	
112	Resistor, 5%, 1W.	910	101156-911	1	C48.
113	Resistor, 5%, 1W	2K	101156-202	1	A34.
114	Resistor, 5%, 1W	330	101156-331	1	B14.
115	Capacitor, Mica	68pf	100243-680	1	B16.
116	Capacitor, Mica	100pf	100243-101	1	B17.
117					
118	Resistor	302075-001	1	C33. test select(1.00 to 50A)	
C-2					

FORM 209 (R.12/74)

8 7 6 5 4 3 2 1

REVISIONS			
REV.	DESCRIPTION	CHK.	DATE APPROVED
A	MFG. RELEASE	JAN 15 1976	PERKIN ELMER
A1	CR10 7563	APR 15 1976	PERKIN ELMER
B	CR10 9167	EST 76	PERKIN ELMER



- (3) INSTALL ITEMS 34, 36, 38, AND 39 PRIOR TO SOLDERING ITEMS 28 AND 29.
- 2 FOR SCHEMATIC REF CEE DWG 301292.
- (1) MARK APPROPRIATE DASH NUMBER, S/N, AND LATEST REVISION LETTER .12 HIGH WHITE CHARACTERS PER P-E SPEC 100037.
- NOTES: UNLESS OTHERWISE SPECIFIED

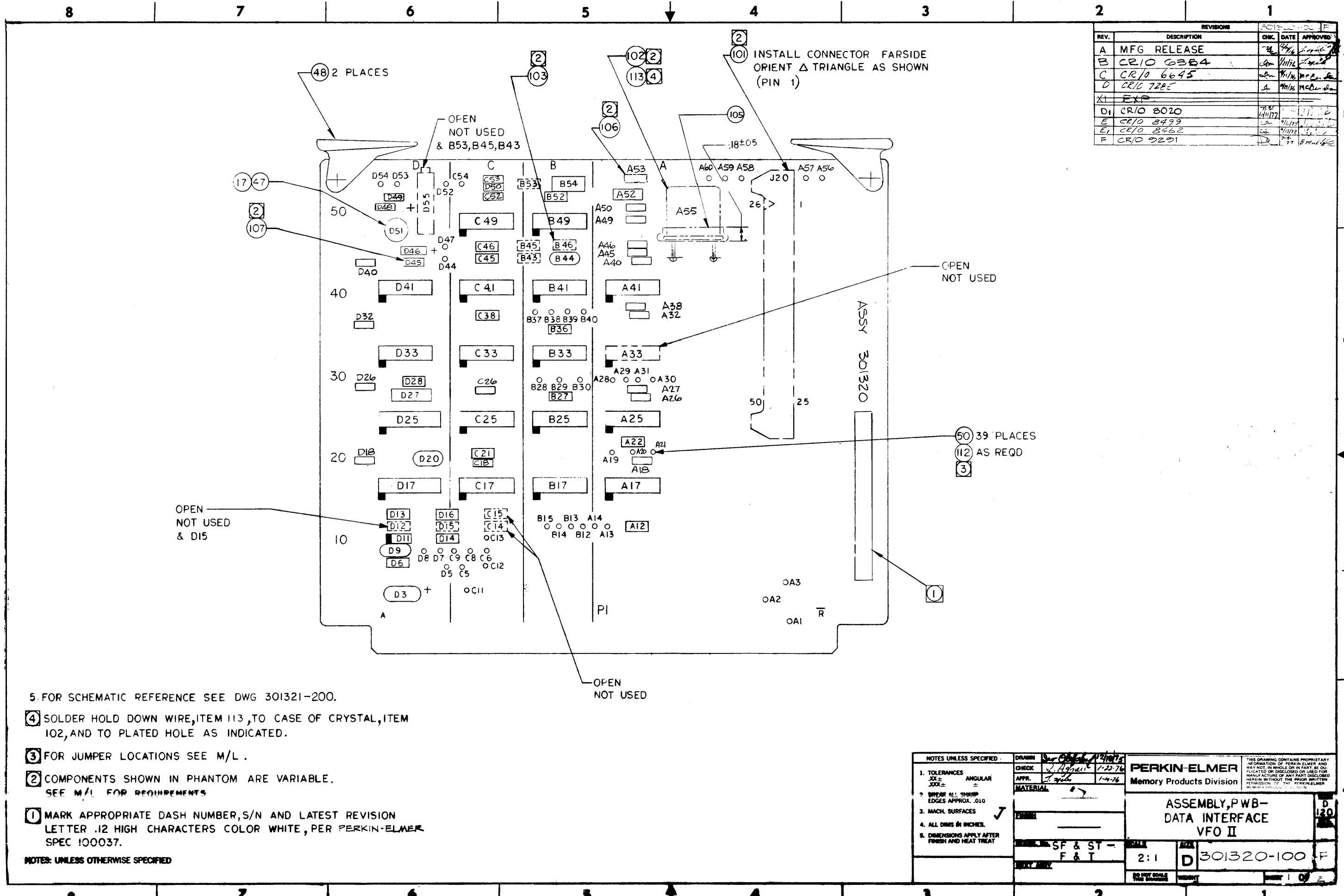
PART NUMBER 301291-001 ASSY

NOTES UNLESS SPECIFIED	DRAWN	3. Olsoby 12/11/75	THIS DRAWING CONTAINS PROPRIETARY INFORMATION OF PERKIN ELMER AND MAY NOT, IN WHOLE OR IN PART, BE DUPLICATED, COPIED, OR DISCLOSED TO OTHERS, NOR MANUFACTURED OR ANY PART DISCLOSED THEREIN, WITHOUT THE WRITTEN PERMISSION OF THE PERKIN ELMER MEMORY PRODUCTS DIVISION
1. TOLERANCES	CHECK	Set up process 12/23/76	CODE
XX± ANGULAR	APPR.	CR10 team 12/23/76	D
- BREAKAWAY EDGES APPROX. .010	MATERIAL		I/O
3. MACH. SURFACES	FINISH		120
4. ALL DIMS IN INCHES	MODEL No.	SF & ST	0V READ
5. DIMENSIONS APPLY AFTER FINISH AND HEAT TREAT	SCALE	2:1	B
	SIZE	D	301291-100
	DO NOT SCALE THIS DRAWING	WEIGHT	SHEET 1 OF 1

PERKIN-ELMER
Memory Products Division

ASSEMBLY, PWB-
I/O

		MATERIAL LIST				PART NUMBER 301291-001	CODE D120
REV.	J.					REV. E	
PART NUMBER 301291-001	TITLE ASSY. PWB. I/O	MODEL SF, ST	DATE 1-16-76 SHEET 1 OF 3				
ITEM NO.	DESCRIPTION	PART NO.	REOD	MIN. REV.	ACT. REV.	REMARKS	NEXT ASSEMBLY/USED ON
1	Board, Processed	301290-001	1	E5			
2	Retainer, Connector-Bottom	300589-001	2			Use with item 28 and 29	
3	I.C.	7402	100329-001	1		D57	
4	I.C.	7404	100330-001	1		B56	
5	I.C. 8T 380 or	8836	100347-001	5		A47, A56, B47, B48, B57	
6	I.C.	7403	101007-001	1		D56	
7	I.C.	75452	101031-001	12		C30, C34, C43, C47, D9, D13, D21, D24, D34, D30, D43, D47	
8	I.C.	7414	123001-001	1		C48	
9	I.C.	74LS08	123032-001	1		D48	
10	Diode, Rectifier	1N4003	100127-001	1		D36	
11	I.C.	75451	101139-001	1		C52	
12							
13	Capacitor, Tant. 6v	56uf	101001-566	3		B49, C59, B39	
14	Capacitor, Tant. 20v	15uf	101002-156	1		A55	
15	Capacitor, Cer. 50v	0.1uf	101087-104	4		A7, A54, D5, D55	
16	Capacitor, Cer. 100v	0.01uf	101042-103	10		B58, B59, B60, C50, C58, C60	
17						D19, D58, D59	
18	RESISTOR, 5 % 1/2 W	56	101156-560	1		C32	
19	Resistor, 5%, 1/4W	75	101156-750	1		A57	
20	Resistor, 5%, "	510	-511	1		B44	
21	Resistor, 5%, "	1K	-102	4		B54, B55, D38, D51, C57	
22	Resistor, 5%, "	10K	-103	7		D35, D37, D39, C44, D44, C45, D49	
23	RESISTOR, 5%, "	100	-101	4		C38, C33, B35, B38	
24	RESISTOR, 5%, "	160	-161	2		B37, C35	
25	RESISTOR, 5%, "	390	-391	1		C32	
26	Switch, Rocker, DIP		149002-007	1		C56	
27							
28	Connector, Male	50 pin	101036-001	1		J22	
29	Connector, Female	50 pin	101037-001	1		J23	



MATERIAL LIST					
PERKIN ELMER Memory Products Division		PART NUMBER	REV.	CODE D120	
		301320-000	F		
ASSEMBLY, PWB. TITLE DATA INTERFACE, VFO II DATE 9/4/75 SHEET 1 OF 2 MODEL SF&ST, F&T					
ITEM NO.	DESCRIPTION	PART NO.	REQD	ACT. REV.	REMARKS
NEXT ASSEMBLY/USED ON					
1	Board, Processed.	301310-001	1		
2					
3					
4	I.C. 9602	100234-001	1	D25.	
5	I.C. 74500	123028-001	1	A41.	
6	I.C. 4924	100344-001	1	B49.	
7	I.C. 4944	100345-001	1	C49.	
8	I.C. 8T20B	101024-001	1	D17.	
9	I.C. 74LS74	123023-001	1	A41.	
10	I.C. 74LS03	123029-001	1	D33.	
11	I.C. 74S04	123046-001	1	B17.	
12	I.C. 74LS08	123032-001	2	B41,C25.	
13	I.C. 74LS11	123034-001	1	A25.	
14	I.C. 74LS32	123035-001	2	B25,C33.	
15	I.C. 74LS74	123036-001	3	B33,C17,C41.	
16	I.C. 74S08	123050-001	1	A17	
17	I.C. 79M05	125005-005	1	D51.	
18					
19					
20	Diode, Zener 1N5231B	101058-006	1	D11.	
21					
22					
23	Capacitor, Mica. 33pf	100243-330	1	D20.	
24	Capacitor, Mica. 47pf	-470	1	B44.	
25	Capacitor, Mica. 510pf	-511	1	B54.	
26					
27	Capacitor .015uf	100078-562	1	A45	
28	Capacitor, Poly. .0027uf	100165-272	1	D27.	
29	Capacitor, Poly. .0047uf	-472	1	A52.	
30	Capacitor, Poly. .01uf	101042-103	12	A18,A26,A32,A40,C18,C26,D9.	
31				D18,D26,D32,D40,D50.	
32	Capacitor, 20v. 2.2uf	101002-225	2	D46,D48.	
33	Capacitor, 6v. 56uf	101001-566	1	D3.	

FORM 209 (R.12/74)

MATERIAL LIST					
PERKIN ELMER Memory Products Division		PART NUMBER	REV.	CODE D120	
		301320-000	F		
ASSEMBLY, PWB. TITLE DATA, INTERFACE, VFO II DATE 9/4/75 SHEET 2 OF 2 MODEL SF & ST, F&T					
ITEM NO.	DESCRIPTION	PART NO.	REQD	ACT. REV.	REMARKS
NEXT ASSEMBLY/USED ON					
34	Resistor, 5%, 1W.	10 101156-100	2	D14,D16.	
35	Resistor, " "	75 -750	3	A12,A22,A27.	
36					
37	Resistor, " "	240 -241	1	D6.	
38	Resistor, " "	200 -201	1	D49.	
39	Resistor, " "	330 -331	2	A38,A46	
40	Resistor, " "	1K -102	9	A50,B27,B36,C21,C38,C45, C46,C52,C53,	
42	Resistor, 5%, 1W.	1.2K 101156-122	1	B52.	
43					
44	Resistor, " "	10K -103	2	D13,D28.	
45	Resistor " "	510 -511	1	A49	
46					
47	Pad Transistor	100223-001	1	Used with Item 17	
48	Extractor, Card.	107901-001	2		
49					
50	Pin Connector .025SQ	100360-001	44	A1,2,3,13,14,19,20,21,28, A29,30,31,56,57,58,59,60, B12,13,14,15,28,29,30,37, B38,39,40,C5,6,8,9,11,12, C13,C4,C5,D9,7,8,44,47,C2,C12, D54	
56	Schematic	301321-200	0		
57	Printed Master	301318-001	0		
58	Test Procedure	900104-001	0		
59	Test Specification	900105-001	0		
60	Specification	301431-001	0		

FORM 209 (R.12/74)

MATERIAL LIST					
PERKIN ELMER Memory Products Division		PART NUMBER	REV.	CODE D120	
		301320-001	E		
1500RPM. WRITE - DF READ - PULSE 'D' 1562 KHZ.					
ASSY, PWB. TITLE DATA, INTERFACE, VFO.II DATE 9/4/75 SHEET 1 OF 1 MODEL SF & ST					
ITEM NO.	DESCRIPTION	PART NO.	REQD	ACT. REV.	REMARKS
USE MATERIAL LIST 301320-000					
NEXT ASSEMBLY/USED ON					
AND ADD THE FOLLOWING:-					
102	Crystal.	101059-002	1	A55.	
103	Capacitor. 20pf	100243-200	1	B46.	
105	Tubing, Thermofit.	100185-009	A/R	Use with item 102.	
106	Capacitor. .0027uf	101004-272	1	A53.	
107	Resistor, 1%, 1W. 6.34K	100155-366	1	D45.	
112	Wire, Solid Insulated.	300648-001	12	Jumper A20 to A21, B37 to B40, B28 to B29, A28 to A30, D44 to D47, B13 to B14, B12 to A13, C6 to C8, C9 to D8, C5 to D5, A2 to A3, C11 to C12	
113	Wire, Solid	100051-024	A/R	Hold Down Wire for Item 102	
114	Rework Inst.	301777-001	0		

FORM 209 (R.12/74)

MATERIAL LIST					
PERKIN ELMER Memory Products Division		PART NUMBER	REV.	CODE D120	
		301320-002	E		
1500RPM. WRITE - DF READ = NRZI 'C' 1562 KHZ.					
ASSY, PWB. TITLE DATA, INTERFACE, VFO.II DATE 9/4/75 SHEET 1 OF 1 MODEL SF & ST					
ITEM NO.	DESCRIPTION	PART NO.	REQD	ACT. REV.	REMARKS
USE MATERIAL LIST 301320-000					
NEXT ASSEMBLY/USED ON					
AND ADD THE FOLLOWING:-					
102	Crystal	101059-002	1	A55.	
103	Capacitor. 20pf	100243-200	1	B46.	
105	Tubing, Thermofit	100185-009	A/R	Use with item 102.	
106	Capacitor. .0027uf	101004-272	1	A53.	
107	Resistor, 1%, 1W. 6.34K	100155-366	1	D45.	
112	Wire, Solid Insulated.	300648-001	A/R	Jumper A20 to A21. Jumper B38 to B40. Jumper B29 to B30. Jumper B13 to B14. Jumper B12 to A13. Jumper C6 to C8. Jumper C9 to D8. Jumper C5 to D5. Jumper A2 to A3. Jumper C11 to C12	
113	Wire, Solid	100051-024	A/R	Hold Down Wire for Item 102	
114	Rework Inst.	301777-001	0		

FORM 209 (R.12/74)

MATERIAL LIST					
WANGCO		PART NUMBER	REV.	CODE D120	
		301320-004	E		
1500RPM. WRITE - NRZI 1562 KHZ. READ - NRZI 'C'					
ASSY, PWB. TITLE DATA INTERFACE, VFO II DATE 9/5/75 SHEET 1 OF 1 MODEL SF & ST					
ITEM NO.	DESCRIPTION	PART NO.	REQD	ACT. REV.	REMARKS
USE MATERIAL LIST 301320-000					
NEXT ASSEMBLY/USED ON					
AND ADD THE FOLLOWING:-					
100	Crystal.	101059-002	1	A55.	
103	Capacitor. 20pf	100243-200	1	B46.	
105	Tubing, Thermofit.	100185-009	A/R	Use with item 102.	
106	Capacitor. .0027uf	101004-272	1	A53.	
107	Resistor, 1%, 1W. 6.34K	100155-366	1	D45.	
112	Wire, Solid Insulated.	300648-001	A/R	Jumper A19 to A20. Jumper A23 to A29. Jumper B38 to B40. Jumper B29 to B30. Jumper B13 to B14. Jumper B12 to A13. Jumper C6 to C8. Jumper C9 to D8. Jumper C5 to D5. Jumper D44 to D47. Jumper A2 to A3. Jumper C11 to C12	
113	Wire, Solid	100051-024	A/R	Hold Down Wire for Item 102	
114	Rework Inst.	301777-001	0		

FORM 209 (R.12/74)

MATERIAL LIST					
PERKIN ELMER Memory Products Division		PART NUMBER	REV.	CODE D120	
		301320-005	E		
1500RPM. WRITE - DF READ - UNDISCRIMINATED 1562 KHZ.					
ASSY., PWB. TITLE DATA INTERFACE, VFO II DATE 9/5/75 SHEET 1 OF 1 MODEL SF & ST					
ITEM NO.	DESCRIPTION	PART NO.	REQD	ACT. REV.	REMARKS
USE MATERIAL LIST 301320-000					
NEXT ASSEMBLY/USED ON					
AND ADD THE FOLLOWING:-					
102	Crystal.	101059-004	1	A55.	
103	Capacitor. 20pf	100243-200	1	B46.	
105	Tubing, Thermofit.	100185-009	A/R	Use with item 102.	
106	Capacitor. .0027uf	101004-272	1	A53.	
107	Resistor, 1%, 1W. 6.34K	100155-366	1	D45.	
112	Wire, Solid Insulated.	300648-001	A/R	Jumper A19 to A20, B37 to B40, B28 to B29, A28 to A30, D44 to D47, B13 to B14, B12 to A13, C6 to C8, C9 to D8, C5 to D5, A2 to A3, C11 to C12	
113	Wire, Solid	100051-024	A/R	Hold Down Wire for Item 102	
114	Rework Inst.	301777-001	0		

FORM 209 (R.12/74)

MATERIAL LIST					
PERKIN ELMER Memory Products Division		PART NUMBER	REV.	CODE D120	
		301320-006	B		
1500RPM. WRITE - DF READ - UNDISCRIMINATED 1562 KHZ.					
ASSY., PWB. TITLE DATA, INTERFACE, VFO II DATE 1-18-77 SHEET 1 OF 1 MODEL SF & ST					
ITEM NO.	DESCRIPTION	PART NO.	REQD	ACT. REV.	REMARKS
USE MATERIAL LIST 301320-000					
NEXT ASSEMBLY/USED					

2400 RPM.
READ - NRZI 'C'

MATERIAL LIST				PART NUMBER	REV.	
PERKIN ELMER Memory Products Division				301320-009	E	
ASSY. PWB. DATA INTERFACE, VFO II						
TITLE MODEL SF & ST DATE 9/5/75 SHEET 1 OF 1						
ITEM NO.	DESCRIPTION	PART NO.	REQD	REV.	ACT. REV.	REMARKS
USE MATERIAL LIST 301320-000 E NEXT ASSEMBLY/USED ON AND ADD THE FOLLOWING:-						
102	Crystal.	101059-003	1		A55.	
105	Tubing, Thermofit.	100185-009	A/R		Use with item 102.	
107	Resistor, 1%, 1W. 4.12K	100155-348	1		D45.	
112	Wire, Solid Insulated.	300648-001	A/R		Jumper A20 to A21. Jumper B33 to B40. Jumper B29 to B30. Jumper A28 to A30. Jumper D44 to D47. Jumper B13 to B14. Jumper B12 to A13. Jumper C6 to C8. Jumper C9 to D8. Jumper C5 to D5. Jumper A2 to A3. A20 to A21. A28 to A30. B12 to A13. B13 to B14. B28 to B29. C5 to D5. C6 to C8. C9 to D8. C11 to C12. D44 to D47	Add
113	Wire, Solid	100051-024	A/R		Hold Down Wire for Item 102	
114	Rework Inst.	301777-001	O			

FORM 209 (R12/74)

2400 RPM.
READ - PULSE 'D'

MATERIAL LIST				PART NUMBER	REV.	
PERKIN ELMER Memory Products Division				301320-010	E	
ASSY. PWB. DATA INTERFACE, VFO II						
TITLE MODEL SF & ST DATE 9/5/75 SHEET 1 OF 1						
ITEM NO.	DESCRIPTION	PART NO.	REQD	REV.	ACT. REV.	REMARKS
USE MATERIAL LIST 301320-000 E NEXT ASSEMBLY/USED ON AND ADD THE FOLLOWING:-						
102	Crystal.	101059-003	1		A55.	
105	Tubing, Thermofit.	100185-009	A/R		Use with item 102.	
107	Resistor, 1%, 1W. 4.12K	100155-348	1		D45.	
112	Wire, Solid Insulated.	300648-001	A/R		Jumper A20 to A21. Jumper B33 to B40. Jumper B29 to B30. Jumper A28 to A30. Jumper D44 to D47. Jumper B13 to B14. Jumper C6 to C8. Jumper C9 to D8. Jumper C5 to D5. Jumper A2 to A3. A20 to A21. A28 to A30. B12 to A13. B13 to B14. B28 to B29. C5 to D5. C6 to C8. C9 to D8. C11 to C12. D44 to D47	Add
113	Wire, Solid	100051-024	A/R		Hold Down Wire for Item 102	
114	Rework Inst.	301777-001	O			

FORM 209 (R12/74)

2400 RPM.
READ - PULSE 'D'

MATERIAL LIST				PART NUMBER	REV.	
PERKIN ELMER Memory Products Division				301320-011	E	
ASSY. PWB. DATA INTERFACE, VFO II						
TITLE MODEL SF, ST DATE 6/2/76 SHEET 1 OF 1						
ITEM NO.	DESCRIPTION	PART NO.	REQD	REV.	ACT. REV.	REMARKS
USE MATERIAL LIST 301320-000 E NEXT ASSEMBLY/USED ON AND ADD THE FOLLOWING:-						
1	301320-000	Assy, PWB, Data Inter. VFO II - Basic		REV E		
28	1 101065-272	Capacitor, Poly .0027uf	D27	Delete		
28	1 101004-562	Capacitor, Poly .0056uf	D27	Add		
102	1 101059-003	Crystal		A55	Add	
105	A/R 100185-009	Tubing, Thermofit		Use with item 102		
107	1 100155-348	Resistor, 1%, 1W 4.12K	D45	Add		
112	12 300648-001	Jumper, Insulated		Jumper A2 to A3 Add A20 to A21 A28 to A30 B12 to A13 B13 to B14 B28 to B29 C5 to D5 C6 to C8 C9 to D8 C11 to C12 D44 to D47 Add		
113	A/R 100051-024	Wire, Solid		Hold Down Wire for Item 102		
114	0 301777-001	Rework Inst.				

FORM 209 (R12/77)

2400 RPM.
READ - UNDISCRIMINATED

MATERIAL LIST				PART NUMBER	REV.	
PERKIN ELMER Memory Products Division				301320-013	E	
ASSY. PWB. DATA INTERFACE, VFO						
TITLE MODEL SF&ST DATE 7-26-76 SHEET 1 OF 1						
ITEM NO.	DESCRIPTION	PART NO.	REQD	REV.	ACT. REV.	REMARKS
USE MATERIAL LIST 301320-000 E NEXT ASSEMBLY/USED ON AND ADD THE FOLLOWING:-						
101	101059-003	Crystal	1	A55		
105	Tubing, Thermofit.	100185-009	A/R	Use with item 102.		
107	Resistor, 1%, 1W 4.12K	100155-348	1	D45		
112	Jumper, Insulated	300648-001	12	Jumper A2 to A3 A13 to B12 A21 to A20 A28 to A30 B13 to B14 B29 to B28 B37 to B40 C5 to D5 C6 to C8 C11 to C12 C9 to D8 D44 to D47		
113	Wire Solid	100051-024	A/R	Use with Item 102,A55.		
114	Rework Inst.	301777-001	O			

FORM 209 (R12/74)

1500 RPM.
WRITE - DF
READ - PULSE 'D'

MATERIAL LIST				PART NUMBER	REV.	
PERKIN ELMER Memory Products Division				301320-017	E	
ASSY. PWB. DATA INTERFACE, VFO II						
TITLE MODEL SF & ST DATE 10/31/77 SHEET 1 OF 1						
ITEM NO.	DESCRIPTION	PART NO.	REQD	REV.	ACT. REV.	REMARKS
1	1 301320-000	Assy, Pwb, Data Interface, VFO II-Bsc	REV E			
102	1 101059-008	Crystal	A55			
103	1 100243-200	Capacitor, 20pf	B46			
105	A/R 100185-009	Tubing, Thermofit				
106	1 101004-272	Capacitor, .0027uf	A53			
107	1 100155-366	Resistor, 1%, 1W 6.34K	D45			
112	A/R 300648-001	Wire, Solid Insulated				
		Jumper A2 to A3 A20 to A21 A28 to A30 B12 to A13 B13 to B14 B28 to B29 B39 to B40 C5 to D5 C6 to C8 C9 to D8 C11 to C12 D44 to D47				
113	A/R 100051-024	Wire, Solid				
		Hold Down Wire for Item 102 Jumper A1 to A2 C11 to C12				
114	0 301777-001	Rework Instruction				

1500 RPM.
WRITE - DF
READ - PULSE 'D'

MATERIAL LIST				PART NUMBER	REV.	
PERKIN ELMER Memory Products Division				301320-101	E	
ASSY. PWB. DATA INTERFACE, VFO.						
TITLE MODEL 100 & 200 TPI DATE 9/5/75 SHEET 1 OF 1						
ITEM NO.	DESCRIPTION	PART NO.	REQD	REV.	ACT. REV.	REMARKS
USE MATERIAL LIST 301320-000 E NEXT ASSEMBLY/USED ON AND ADD THE FOLLOWING:-						
101	Connector	101040-002	1		J20.	
102	Crystal	101059-002	1		A55.	
103	Capacitor, 20pf	100243-200	1		B46.	
105	Tubing, Thermofit	100185-009	A/R		Use with Item 102	
106	Capacitor, .0027uf	101004-272	1		A53.	
107	Resistor, 1%, 1W 6.34K	100155-366	1		D45.	
112	Wire, Solid Insulated.	300648-001	A/R		Jumper A20 to A21. Jumper B39 to B40. Jumper B28 to B29. Jumper A28 to A30. Jumper D7 to D8. Jumper D44 to D47. Jumper B13 to B15. Jumper A14 to B12.	
113	Wire, Solid	100051-024	A/R		Hold Down Wire for Item 102 Jumper A1 to A2 C11 to C12	
114	Rework Instructions	301777-001	O			

1500 RPM.
WRITE - DF
READ - NRZI 'C'

MATERIAL LIST				PART NUMBER	REV.	
PERKIN ELMER Memory Products Division				301320-102	F	
ASSY. PWB. DATA INTERFACE, VFO.						
TITLE MODEL 100 & 200 TPI DATE 9/5/75 SHEET 1 OF 1						
ITEM NO.	DESCRIPTION	PART NO.	REQD	REV.	ACT. REV.	REMARKS
USE MATERIAL LIST 301320-000 E NEXT ASSEMBLY/USED ON AND ADD THE FOLLOWING:-						
101	Connector	101040-002	1		J20.	
102	Crystal	101059-002	1		A55.	
103	Capacitor, 20pf	100243-200	1		B46.	
105	Tubing, Thermofit	100185-009	A/R		Use with Item 102	
106	Capacitor, .0027uf	101004-272	1		A53.	
107	Resistor, 1%, 1W 6.34K	100155-366	1		D45.	
112	Wire, Solid Insulated.	300648-001	A/R		Jumper A20 to A21. Jumper B38 to B40. Jumper B29 to B30. Jumper A28 to A30. Jumper D7 to D8. Jumper D44 to D47. Jumper B13 to B15. Jumper A14 to B12.	
113	Wire, Solid	100051-024	A/R		Hold Down Wire for Item 102 Jumper A1 to A2 C11 to C12	
114	Rework Instructions	301777-001	O			

1500 RPM.
WRITE - NRZI 'C'

MATERIAL LIST				PART NUMBER	REV.	
PERKIN ELMER Memory Products Division				301320-104	F	
ASSY. PWB. DATA INTERFACE, VFO						
TITLE MODEL 100 & 200 TPI DATE 9/5/75 SHEET 1 OF 1						
ITEM NO.	DESCRIPTION	PART NO.	REQD	REV.	ACT. REV.	REMARKS
USE MATERIAL LIST 301320-000 E NEXT ASSEMBLY/USED ON AND ADD THE FOLLOWING:-						
101	Connector	101040-002	1		J20.	
102	Crystal	101059-002	1		A55.	
103	Capacitor, 20pf	100243-200	1		B46.	
105	Tubing, Thermofit	100185-009	A/R		Use with Item 102	
106	Capacitor, .0027uf	101004-272	1		A53.	
107	Resistor, 1%, 1W 6.34K	100155-366	1		D45.	
112	Wire, Solid Insulated.	300648-001	A/R		Jumper A19 to A20. Jumper A28 to A29. Jumper B38 to B40. Jumper B29 to B30. Jumper D7 to D8. Jumper B13 to B15. Jumper A14 to B12.	
113	Wire, Solid	100051-024	A/R		Hold Down Wire for Item 102 Jumper A1 to A2 C11 to C12	
114	Rework Instructions	301777-001	O			

1500 RPM.
WRITE - NRZI 'C'

MATERIAL LIST				PART NUMBER	REV.
PERKIN ELMER Memory Products Division				301320-104	G
ASSY. PWB. DATA INTERFACE, VFO					
TITLE MODEL 100 & 200 TPI DATE 9/5/75 SHEET 1 OF 1					

1500RPM.		WRITE - NRZI	1500.5 KHz.	POSITIONER	CODE D120
READ - NRZI 'C'					
PERKIN ELMER Memory Products Division		MATERIAL LIST		PART NUMBER REV.	
ASSY. PUB. DATA INTERFACE, VFO		MODEL 100 & 200 TPI		DATE 9/5/75	SHEET 1 OF 1
ITEM NO. DESCRIPTION		PART NO.	REQD REV.	ACT. REV.	REMARKS
USE MATERIAL LIST AND ADD THE FOLLOWING:-		301320-000	E		NEXT ASSEMBLY/USED ON
101 Connector		101040-002	1		J20.
102 Crystal		101059-003	1		A55.
103 Capacitor 20pf		100243-200	1		B46.
105 Tubing, Thermofit		100185-009	A/R		Use with Item 102
106 Capacitor .0027uf		101004-272	1		A53.
107 Resistor, 1%, 1W. 6.34K		100155-366	1		D45.
112 Wire, Solid Insulated.		300648-001	8		Jumper A20 to A21.
					Jumper B37 to B40.
					Jumper B28 to B29.
					Jumper A28 to A30.
					Jumper D7 to D8.
					Jumper D44 to D47.
					Jumper B13 to B15.
					Jumper A14 to B12.
113 Wire, Solid		100051-024	A/R		Use with Item 102, A55.
					Jumper A1 to A2
					C11 to C12
Rework instructions		301777-001	O		Rework instructions
					301777-001 O
FORM 209 (R.12/74)					

1500RPM		WRITE - DF	POSITIONER	CODE D120	
READ - UNDISCRIMINATED					
PERKIN ELMER Memory Products Division		MATERIAL LIST		PART NUMBER REV.	
ASSY. PWB. DATA INTERFACE, VFO.		MODEL 100 & 200 TPI		DATE 1-15-76	
ITEM NO. DESCRIPTION		PART NO.	REQD REV.	ACT. REV.	
USE MATERIAL LIST AND ADD THE FOLLOWING:-		301320-106	E		
101 Connector		101040-002	1		J20.
102 Crystal		101059-003	1		A55.
103 Capacitor 20pf		100243-200	1		B46.
105 Tubing, Thermofit		100185-009	A/R		Use with Item 102
106 Capacitor .0027uf		101004-272	1		A53.
107 Resistor, 1%, 1W. 6.34K		100155-366	1		D45.
112 Jumper, Insulated		300648-001	8		Jumper A20 to A21.
					Jumper B37 to B40.
					Jumper B28 to B29.
					Jumper A28 to A30.
					Jumper D7 to D8.
					Jumper D44 to D47.
					Jumper B13 to B15.
					Jumper A14 to B12.
113 Wire, Solid		100051-024	A/R		Use with Item 102, A55.
					Jumper A1 to A2
					C11 to C12
Rework instructions		301777-001	O		Rework instructions
					301777-001 O
FORM 209 (R.12/74)					

2400RPM		WRITE - NRZI	POSITIONER	CODE D120	
READ - NRZI 'C'					
PERKIN ELMER Memory Products Division		MATERIAL LIST		PART NUMBER REV.	
ASSY. PWB. DATA INTERFACE, VFO.		MODEL 100 & 200 TPI		DATE 9/5/75	
ITEM NO. DESCRIPTION		PART NO.	REQD REV.	ACT. REV.	
USE MATERIAL LIST AND ADD THE FOLLOWING:-		301320-107	E		
101 Connector		101040-002	1		J20.
102 Crystal		101059-003	1		A55.
105 Tubing, Thermofit		100185-009	A/R		Use with Item 102
107 Resistor, 1%, 1W. 4.12K		100155-348	1		D45.
112 Wire, Solid Insulated.		300648-001	A/R		Jumper A19 to A20.
					Jumper A28 to A29.
					Jumper B29 to B30.
					Jumper D7 to D8.
					Jumper D44 to D47.
					Jumper B13 to B15.
					Jumper A14 to B12.
113 Wire, Solid		100051-024	A/R		Hold Down Wire for Item 102
					Jumper A1 to A2
					C11 to C12
Rework instructions		301777-001	O		Rework instructions
					301777-001 O
FORM 209 (R.12/74)					

2400 RPM		WRITE - DF	POSITIONER	CODE D120	
READ - NRZI 'C'					
PERKIN ELMER Memory Products Division		MATERIAL LIST		PART NUMBER REV.	
ASSY. PWB. DATA INTERFACE, VFO.		MODEL 100 & 200 TPI		DATE 9/5/75	
ITEM NO. DESCRIPTION		PART NO.	REQD REV.	ACT. REV.	
USE MATERIAL LIST AND ADD THE FOLLOWING:-		301320-109	E		
101 Connector		101040-002	1		J20.
102 Crystal		101059-003	1		A55.
107 Resistor, 1%, 1W. 4.12K		100155-348	1		D45.
112 Wire, Solid Insulated.		300648-001	A/R		Jumper A20 to A21.
					Jumper B28 to B40.
					Jumper B29 to B30.
					Jumper A28 to A30.
					Jumper D7 to D8.
					Jumper D44 to D47.
					Jumper B13 to B15.
					Jumper A14 to B12.
113 Wire, Solid		100051-024	A/R		Hold Down Wire for Item 102
					Jumper A1 to A2
					C11 to C12
Rework instructions		301777-001	O		Rework instructions
					301777-001 O
FORM 209 (R.12/74)					

2400RPM		WRITE - DF	POSITIONER	CODE D120	
READ - PULSE 'D'					
PERKIN ELMER Memory Products Division		MATERIAL LIST		PART NUMBER REV.	
ASSY. PWB. DATA INTERFACE, VFO		MODEL 100 & 200 TPI		DATE 9/5/75	
ITEM NO. DESCRIPTION		PART NO.	REQD REV.	ACT. REV.	
USE MATERIAL LIST AND ADD THE FOLLOWING:-		301320-110	E		
101 Connector		101040-002	1		J20.
102 Crystal		101059-003	1		A55.
107 Resistor, 1%, 1W. 4.12K		100155-348	1		D45.
112 Wire, Solid Insulated.		300648-001	A/R		Jumper A20 to A21.
					Jumper B39 to B40.
					Jumper B28 to B29.
					Jumper A28 to A30.
					Jumper D7 to D8.
					Jumper D44 to D47.
					Jumper B13 to B15.
					Jumper A14 to B12.
105 Tubing, Thermofit		100185-009	A/R		Use with Item 102
113 Wire, Solid		100051-024	A/R		Hold Down Wire for Item 102
					Jumper A1 to A2
					C11 to C12
Rework instructions		301777-001	O		Rework instructions
					301777-001 O
FORM 209 (R.12/74)					

2400RPM		WRITE - DF	POSITIONER	CODE D120	
READ - UNDISCRIMINATED					
PERKIN ELMER Memory Products Division		MATERIAL LIST		PART NUMBER REV.	
ASSY. PWB. DATA INTERFACE, VFO		MODEL 100 & 200 TPI		DATE 1-15-76	
ITEM NO. DESCRIPTION		PART NO.	REQD REV.	ACT. REV.	
USE MATERIAL LIST AND ADD THE FOLLOWING:-		301320-113	E		
101 Connector		101040-002	1		J20.
102 Crystal		101059-003	1		A55.
105 Tubing, Thermofit		100185-009	A/R		Use with Item 102
107 Resistor, 1%, 1W. 4.12K		100155-348	1		D45.
112 Jumper, Insulated		300648-001	8		Jumper A21 to A20.
					Jumper B28 to B29.
					Jumper A28 to A30.
					Jumper D7 to D8.
					Jumper D44 to D47.
					Jumper B13 to B15.
					Jumper A14 to B12.
113 Wire, Solid		100051-024	A/R		Use with Item 102, A55.
					Jumper A1 to A2
					C11 to C12
Rework instructions		301777-001	O		Rework instructions
					301777-001 O
FORM 209 (R.12/74)					

2400 RPM		WRITE - DF	POSITIONER	CODE D120	
READ - PULSE 'D'					
PERKIN ELMER Memory Products Division		MATERIAL LIST		PART NUMBER REV.	
ASSY. PWB. DATA INTERFACE, VFO II		MODEL F&T		DATE 6-2-76	
ITEM NO. DESCRIPTION		PART NO.	REQD REV.	ACT. REV.	
USE MATERIAL LIST AND ADD/DELETE THE FOLLOWING:		301320-116	E		
101 Connector		101040-002	1		J20.
28 Capacitor, Poly .0027uf		100165-272	1		D27 Delete
28 Capacitor, Poly .0056uf		101004-562	1		D27 Add.
101 Connector		101040-002	1		J20 Add.
102 Crystal		101059-003	1		A55 Add.
107 Resistor, 1%, 1W. 4.12K		100155-348	1		D45 Add.
112 Jumper, Insulated		300648-001	10		Jumper A20 to A21 Add.
					Jumper B39 to B40 Add.
					Jumper B28 to B29 Add.
					Jumper A28 to A30 Add.
					Jumper D7 to D8 Add.
					Jumper D44 to D47 Add.
					Jumper B13 to B15 Add.
					Jumper A14 to B12 Add.
					Jumper A1 to A2 Add.
					Jumper C11 to C12 Add.
105 Tubing, Thermofit		100185-009	A/R		Use with Item 102
113 Wire, Solid		100051-024	A/R		

REF	REV	PILOT RELEASE THIS DRAWING TO BE USED FOR THE PROCUREMENT OF PIECES ONLY PROJECT ENG DATE		
	C	PERKIN-ELMER Memory Products Division		
PART NUMBER	301320-201	MATERIAL LIST	CODE D120	
		1500RPM WRITE - DF READ - NRZI 'C' 1562kHz Special: HARRIS DALLAS GENERAL AUTOMATION CODE D120		
		THIS DRAWING CONTAINS PROPRIETARY INFORMATION OF PERKIN-ELMER AND MAY NOT IN WHOLE OR IN PART BE DUPLICATED OR DISCLOSED OR USED FOR MANUFACTURE OF ANY EQUIPMENT. THIS DRAWING IS THE SOLE PROPERTY OF THE PERKIN-ELMER MEMORY PRODUCTS DIV.		
		NEXT ASSY: PART NUMBER REV 301320-201 B		
		ASSY., PWB, DATA INTERFACE, VFO, 1500 RPM, WRITE - DF, READ - PULSE 'D' 100 TPI INFOMAG POSITIONER, 1562 kHz MODEL F & T DATE 2-13-78 SHEET 1 OF 1		
ITEM NO.	REOQ	PART NO.	DESCRIPTION	REMARKS
1	1	301320-000	Assy, Pwb., Data Interface - Basic	REV E
101	1	101040-002	Connector	J20
102	1	101059-002	Crystal	A55
103	1	100243-200	Capacitor 20pf	B46
105	A/R	100185-009	Tubing, Thermofit	Use with item 102
106	1	101004-272	Capacitor .0027uf	A53
107	1	100155-366	Resistor, 1%, 1W 6.34k	D45
112	A/R	300648-001	Wire, Solid Insulated	Jumper A1 to A2 A14 to B12 A20 to A21 A28 to A30 B13 to B15 B28 to B29 B39 to B40 C12 to C13 D7 to D8 D44 to D47
113	A/R	100051-024	Wire, Solid	Hold down wire for item 102

FORM 209 (R 9/77)

INFOMAG POSITIONER
WRITE - DF
READ - PULSE 'D'
Special: Harris Florida
CODE D120

REF	REV	PILOT RELEASE THIS DRAWING TO BE USED FOR THE PROCUREMENT OF PIECES ONLY PROJECT ENG DATE		
	C	PERKIN-ELMER Memory Products Division		
PART NUMBER	301320-210	MATERIAL LIST	CODE D120	
		2400RPM WRITE - DF READ - PULSE 'D' 100 & 200 TPI MODEL 100 & 200 TPI DATE 3-29-76 SHEET 1 OF 1		
ITEM NO.	REOQ	PART NO.	DESCRIPTION	REMARKS
1	1	301320-000	USE MATERIAL LIST AND ADD THE FOLLOWING:	NEXT ASSEMBLY/USED ON
101	1	101040-002	Connector	J20
102	1	101059-003	Crystal	A55
105	A/R	100185-009	Tubing, Thermofit	Use with Item 102
107	1	100155-348	Resistor, 1%, 1W 4.12K	D45
112	1	300648-001	Wire, Solid Insulated	Jumper A20 to A21 B29 to B40 B28 to B29 A28 to A30 D7 to D8 D44 to D47 B13 to B15 A14 to B12 A1 to A2 C12 to C13
113	1	100051-024	Wire, Solid	Hold Down Wire for Item 102
Rework Instructions	1	301614-001	0	

FORM 209 (R 12/74)

REF	REV	PILOT RELEASE THIS DRAWING TO BE USED FOR THE PROCUREMENT OF PIECES ONLY PROJECT ENG DATE		
	C	PERKIN-ELMER Memory Products Division		
PART NUMBER	301320-202	MATERIAL LIST	CODE D120	
		1500RPM WRITE - DF READ - NRZI 'C' 1562kHz Special: HARRIS DALLAS GENERAL AUTOMATION CODE D120		
		ASSY. PWB. DATA INTERFACE, VFO MODEL 100 & 200 TPI DATE 3-29-76 SHEET 1 OF 1		
ITEM NO.	REOQ	PART NO.	DESCRIPTION	REMARKS
1	1	301320-000	USE MATERIAL LIST AND ADD THE FOLLOWING:	NEXT ASSEMBLY/USED ON
101	1	101040-002	Connector	J20
102	1	101059-002	Crystal	A55
103	1	100243-200	Capacitor 20pf	B46
105	A/R	100185-001	Tubing, Thermofit	Use with Item 102
106	1	101004-272	Capacitor .0027uf	A53
107	1	100155-366	Resistor, 1%, 1W 6.34k	D45
112	1	300648-001	Wire, Solid Insulated	Jumper A20 to A21 B29 to B40 B28 to B30 A28 to A30 D7 to D8 D44 to D47 B13 to B15 A14 to B12 A1 to A2 C12 to C13
113	1	100051-024	Wire, Solid	Hold Down Wire for Item 102
Rework Instructions	1	301614-001	0	

FORM 209 (R 12/74)

REF	REV	PILOT RELEASE THIS DRAWING TO BE USED FOR THE PROCUREMENT OF PIECES ONLY PROJECT ENG DATE		
	C	PERKIN-ELMER Memory Products Division		
PART NUMBER	301320-202	MATERIAL LIST	CODE D120	
		2400RPM WRITE - NRZI READ - NRZI INFOMAG POSITIONER		
		ASSY. PWB. DATA INTERFACE, VFO MODEL 100 & 200 TPI DATE 6/16/77 SHEET 1 OF 1		
ITEM NO.	REOQ	PART NO.	DESCRIPTION	REMARKS
1	1	301320-000	USE MATERIAL LIST AND ADD THE FOLLOWING:	NEXT ASSEMBLY/USED ON
101	1	301320-000	Assy., PWB, Trans. Elec. - Basic	REV E
102	1	101040-002	Connector	J20
103	1	101059-003	Crystal	A55
105	A/R	100185-009	Tubing, Thermofit	Use with Item 102
106	1	101004-272	Capacitor .0027uf	A53
107	1	100155-348	Resistor, 1%, 1W 4.12K	D45
112	1	300648-001	Wire, Solid Insulated	Jumper A19 to A20 A28 to A29 B38 to B40 B29 to B30 D7 to D8 D44 to D47 B13 to B15 A14 to B12 A1 to A2 C12 to C13
113	1	100051-024	Wire, Solid	Hold Down Wire for Item 102
Rework Instructions	1	301614-001	0	

FORM 209 (R 3/77)

REF	REV	PILOT RELEASE THIS DRAWING TO BE USED FOR THE PROCUREMENT OF PIECES ONLY PROJECT ENG DATE		
	C	PERKIN-ELMER Memory Products Division		
PART NUMBER	301320-209	MATERIAL LIST	CODE D120	
		2400RPM WRITE - DF READ - NRZI 'C' INFOMAG POSITIONER		
		ASSY. PWB. DATA INTERFACE, VFO MODEL 100 & 200 TPI DATE 10-26-76 SHEET 1 OF 1		
ITEM NO.	REOQ	PART NO.	DESCRIPTION	REMARKS
1	1	301320-000	USE MATERIAL LIST AND ADD THE FOLLOWING:	NEXT ASSEMBLY/USED ON
101	1	101040-002	Connector	J20
102	1	101059-003	Crystal	A55
107	1	100155-348	Resistor, 1%, 1W 4.12K	D45
112	1	300648-001	Wire, Solid Insulated	Jumper A20 to A21 B38 to B40 B29 to B30 D7 to D8 D44 to D47 B13 to B15 A14 to B12 A1 to A2 C12 to C13
105	A/R	100185-009	Tubing, Thermofit	Use with Item 102
113	1	100051-024	Wire, Solid	Hold Down Wire for Item 102
Rework Instructions	1	301614-001	0	

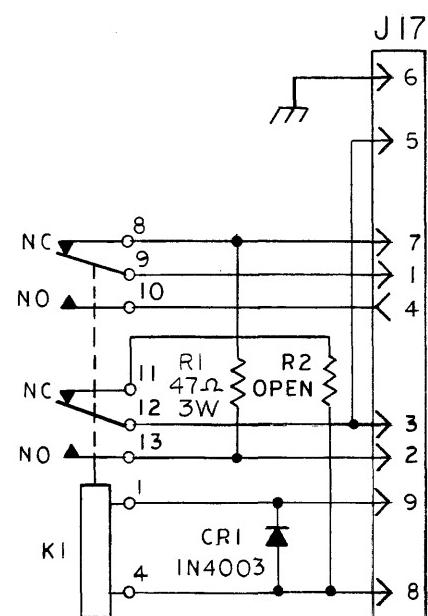
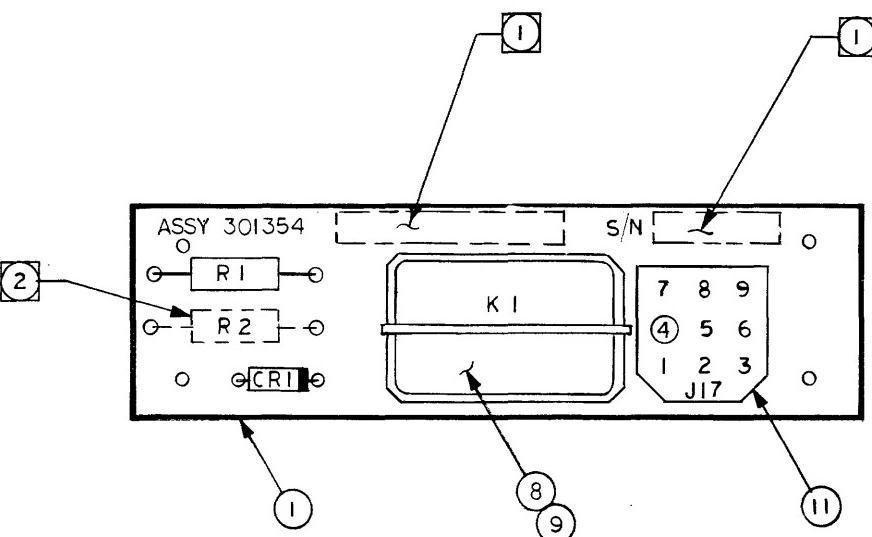
FORM 209 (R 12/74)

REF	REV	PILOT RELEASE THIS DRAWING TO BE USED FOR THE PROCUREMENT OF PIECES ONLY PROJECT ENG DATE		
	A	PERKIN-ELMER Memory Products Division		
PART NUMBER	301320-211	MATERIAL LIST	CODE D120	
		2400RPM INFOMAG POSITIONER		
		SF & ST DATE 5/1/79 SHEET 1 OF 1		
ITEM NO.	REOQ	PART NO.	DESCRIPTION	REMARKS
1	1	301320-000	USE MATERIAL LIST AND ADD THE FOLLOWING:	NEXT ASSEMBLY/USED ON
101	1	101040-002	Connector	J20
102	1	101059-003	Crystal	A55
105	A/R	100185-009	Tubing, Thermofit	Use with Item 102
107	1	100155-348	Resistor, 1%, 1W 4.12K	D45
112	1	300648-001	Wire, Solid Insulated	Jumper A20 to A21 B29 to B40 B28 to B29 A28 to A30 D7 to D8 D44 to D47 B13 to B15 A14 to B12 A1 to A2 C12 to C13
113	1	100051-024	Wire, Solid	Hold Down Wire for Item 102
Rework Instructions	1	301614-001	0	

FORM 209 (R 9/77)



REVISONS			
REV.	DESCRIPTION	CHK.	DATE APPROVED
A	PILOT RELEASE	TL	Sept 29 1978
A	MFG REL. NO CHANGE	AM	Sept 26 1978
X1	EXP AUTO INSERTION		
A1	CR/O 8343	MV	1/31/78 CAC
A2	CR/O 8485	AM	1/21/78 J. Lewis
B	CR/O 9349	DD	1/27/78 D. M. M.



② RESISTOR R2 NOT USED ON THIS ASSEMBLY.

① MARK APPROPRIATE DASH NUMBER,
LATEST REVISION LEVEL AND S/N .12 HIGH
BLACK CHARACTERS PER P-E SPEC 100037.

NOTES: UNLESS OTHERWISE SPECIFIED;

NOTES UNLESS SPECIFIED	DRAWN	S. Olesky	8/22/75
1. TOLERANCES	CHECK	DEC	7/27/75
XXX± — ANGULAR	APPR.	O. M. Jackson	7/12/75
XXX± — ± —	MATERIAL		
2. BREAK ALL SHARP EDGES APPROX. .010	FINISH		
3. MACH. SURFACES — ✓	MODEL NO.	SF, ST	
4. ALL DIMS IN INCHES.	SCALE	2:1	C 301354-100 B
	SIZE		
	NEXT ASSY	400000	
		400001	
	DO NOT SCALE THIS DRAWING		WEIGHT
			SHEET 1 OF 1

PART NO. 301354-100

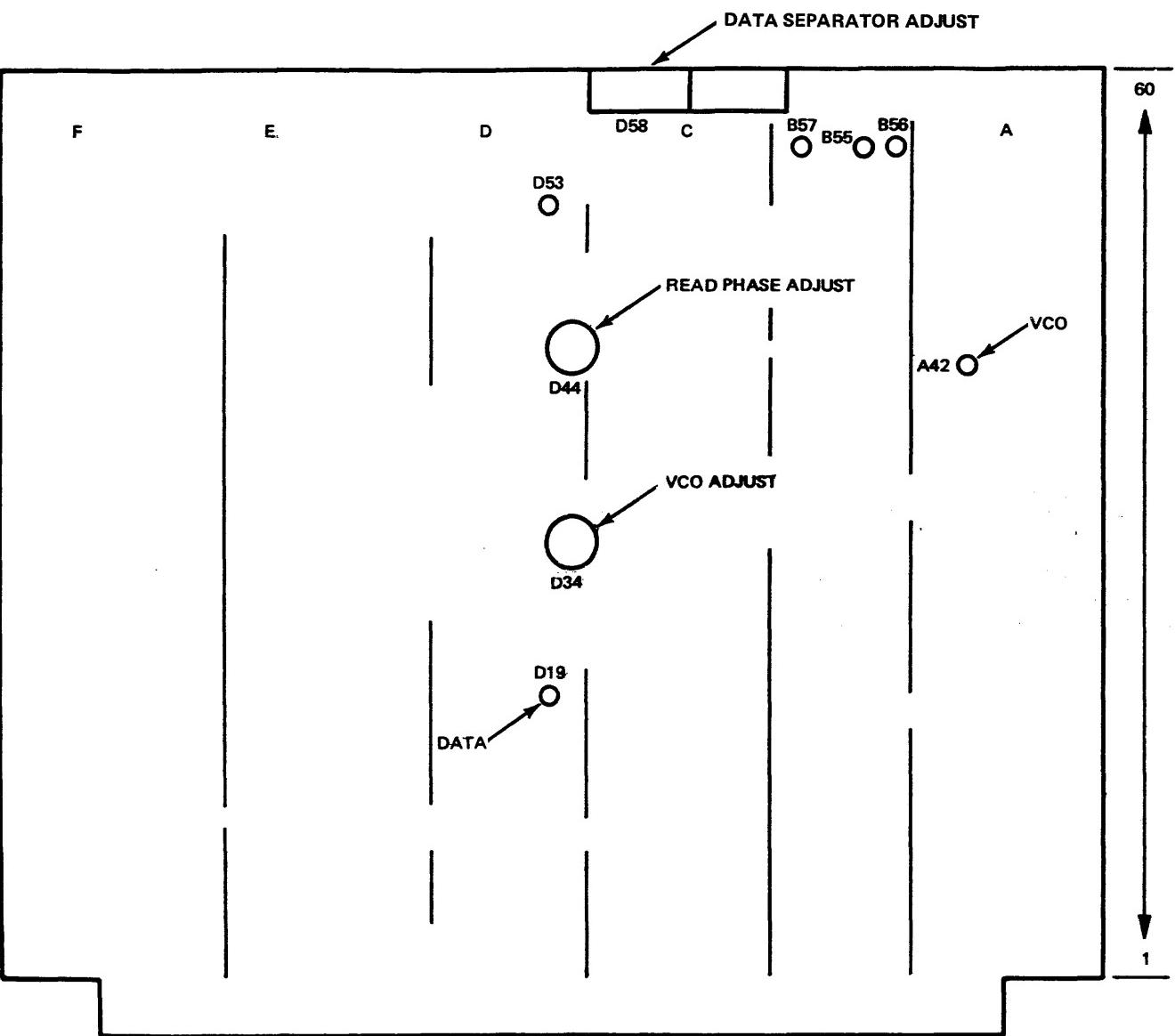
PERKIN-ELMER
Memory Products Division

ASSEMBLY, PWB -
EMERGENCY RETRACT
M2

CODE
D
120
QTY.
REQ'D.
1

THIS DRAWING CONTAINS PROPRIETARY INFORMATION OF PERKIN-ELMER AND
MAY NOT BE INFRINGED OR REPRODUCED, OR USED FOR
MANUFACTURE OF ANY PART DISCLOSED
HEREIN WITHOUT THE PRIOR WRITTEN
CONSENT OF PERKIN-ELMER
MEMORY PRODUCTS DIVISION

FORM 209 IR.12/74



MFM DATA CONTROL PWB

301422

REV.	PART NUMBER	MATERIAL LIST			
		PART NUMBER	REV.		
	301422-000	G			
TITLE ASSY., PWB. MFM DATA CONTROL MODEL SF&ST DATE 12-13-76 SHEET 1 OF 4					
ITEM NO.	DESCRIPTION	PART NO.	REQD	ACT. REV.	REMARKS
NEXT ASSEMBLY/USED ON					
1	Board, Processed	301421-001	1	F	
2					
3					
4					
5					
6	I.C. 9602	100234-001	1	C38,	
7	I.C. 8T20	101024-001	2	C10,017	
8	I.C. 74574	123023-001	5	A10,45,52,C17,E52	
9	I.C. 74500	123028-001	1	B17	
10	I.C. 74504	123046-001	3	C24,E17,F45	
11	I.C. 74508	123050-001	3	A24,B38,F24	
12	I.C. 745132	123067-001	2	B10,E10	
13	I.C. 74510	123068-001	6	A31,38,B31,E38,F31,38	
14	I.C. 745124	123069-001	1	D38	
15	I.C. 745153	123070-001	1	E31	
16	I.C. 745175	123071-001	1	E24	
17	I.C. 79M05	125007-005	1	E7	
18	I.C. 2515	125010-001	1	D33	
19	I.C. 78M05	125002-001	1	D53	
20					
21	Capacitor, Mica 20pf	100243-200	2	C12,D18	
22	Capacitor, " 22pf	" -220	1	D36	
23	Capacitor, " 27pf	" -270	2	C36,42	
24	Capacitor, " 56pf	" -560	1	B14	
25	Capacitor, " 33pf	" -330	2	F51,55	
26	Capacitor, " 100pf	" -101	1	D35	
27					
28					
29	Capacitor, Tant. 20V 2.2uf	101002-225	7	C6,43,D45,F6,14,15,56	
30	Capacitor, " 15uf	" -156	1	F12	
31					
32	Capacitor, Poly .015uf	101004-153	1	C35	
33					

FORM 209 (R.12/74)

REV.	PART NUMBER	MATERIAL LIST			
		PART NUMBER	REV.		
	301422-000	G			
TITLE ASSY., PWB. MFM DATA CONTROL MODEL SF&ST DATE 12-13-76 SHEET 2 OF 4					
ITEM NO.	DESCRIPTION	PART NO.	REQD	ACT. REV.	REMARKS
NEXT ASSEMBLY/USED ON					
34	Capacitor, Ceramic .01uf	101042-103	30		A11,18,25,32,39,46,53,C11, C18,25,39,D5,11,29,31,32, E11,18,25,32,36,37,46,54, F11,18,25,32,39,46.
35	Crystal 20 MHz	106500-002	1	F50	
36	Diode 1N4003	100127-001	2	E4,C44	
37					
38					
39	Wire, (Bare) 24 AG	100051-024	A/R		Hold Down for F50
40					
41					
42	Inductor 4.7uh	122500-006	3	E41,F41,49	
43	Inductor 220uh	" -001	2	F4,8	
44					
45	Resistor, Variable 10K	100163-103	1	D58	
46	Resistor, Variable 20K	138000-203	1	D44	
47	Resistor, Variable 1K	" -102	1	D34	
48					
49					
50	Resistor, 5%,3W 39	100068-390	1	D48	
51					
52					
53	Resistor, 1%,3W 1K	100155-289	1	E40	
54	Resistor, " 2.21K	" -322	2	F40,42	
55	Resistor, " 2.37K	" -325	1	D12	
56	Resistor, " 10K	" -385	2	C30,31	
57					
58	Resistor, 5%,3W 10	101156-100	2	D4, D6	
59	Resistor, " 75	" -750	3	A28,B5,E39	
60	Resistor, " 100	" -101	2	D42,F48	
61	Resistor, " 150	" -151	3	B13,E6,55	
62	Resistor, " 510	" -511	1	D37	

FORM 209 (R.12/74)

REV.	PART NUMBER	MATERIAL LIST			
		PART NUMBER	REV.		
	301422-000	G			
TITLE ASSY., PWB. MFM DATA CONTROL MODEL SF&ST DATE 12-13-76 SHEET 3 OF 4					
ITEM NO.	DESCRIPTION	PART NO.	REQD	ACT. REV.	REMARKS
NEXT ASSEMBLY/USED ON					
63	Resistor, 5%,3W 1K	101156-102	5		C32,D3,9,47, 25
64					
65	Resistor, " " 2K	" -202	2		C40,47,
66	Resistor, " " 2.2K	" -222	12		A48,B11,41,42,43,C13,20, C37,D41,E13,34,60.
67					
68	Resistor, 5%,3W 1.5K	101156-152	1		E56
69	Resistor, " " 6.8K	" -682	1		E12
70	Resistor, " " 82K	" -823	1		D26
71	Resistor, " " 30K	" -303	2		F53,54
72	Resistor, " " 3.9K	" -392	1		D28
73	Resistor, " " 240	" -241	1		E57
74					
75					
76	Transistor 2N2857	151006-001	1		E53
77					
78					
79	Extractor 10790-001	2			
80					
81	Pin, Wire Wrap 100360-001	26			A35,36,37,40,41,42,43,47,49, A50,B55,56,57,C34,54,58,D19, E23,42,43,44,58,59,F33,34, F35
82					
83	Wire, Jumper, Insulated 300648-001	1			Jumper E58 to E59
84	Screw, Pan Hd. 100036-206	1			4-40 x 3/8"
85	Washer, Flat 100047-200	1			No. 4
86	Washer, Spring Lock 100042-200	1			No. 4
87	Nut, Hex. 100043-200	2			4-40
88					
89					
90					
91					
92					
93					
94					
95	Jumper, Insulated 300648-001	4			Jumper: A35 to A36 A49 to A47 F35 to F34 E42 to E44

FORM 209 (R.12/74)

REV.	PART NUMBER	MATERIAL LIST			
		PART NUMBER	REV.		
	301422-001	H			
TITLE ASSY., PWB. MFM DATA CONTROL MODEL SF&ST DATE 6-21-76 SHEET 1 OF 1					
ITEM NO.	DESCRIPTION	PART NO.	REQD	ACT. REV.	REMARKS
NEXT ASSEMBLY/USED ON					
USE MATERIAL LIST AND ADD THE FOLLOWING:					
90					
91					
92					
93					
94					
95	Jumper, Insulated 300648-001	4			

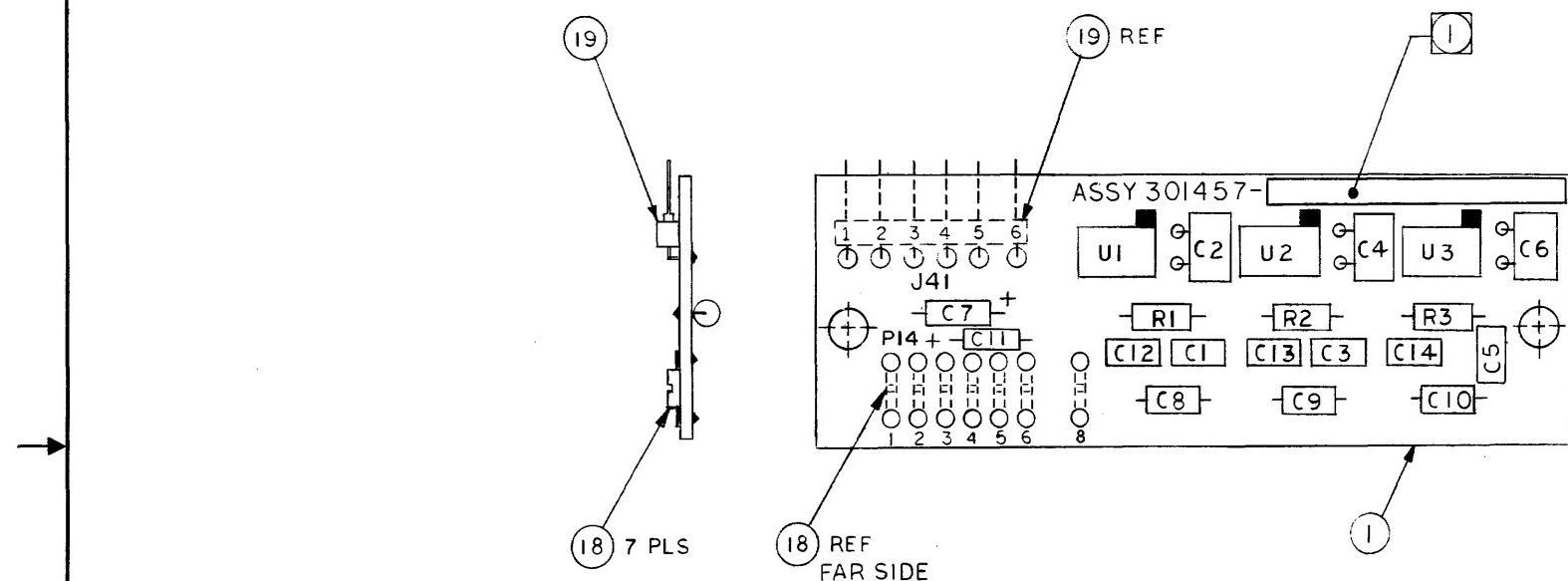
FORM 209 (R.12/74)

REV.	PART NUMBER	MATERIAL LIST			
		PART NUMBER	REV.		
	301422-002	B1			
TITLE ASSY., PWB. MFM DATA CONTROL MODEL SF&ST DATE 2/21/78 SHEET 1 OF 1					
ITEM NO.	REQD	PART NO.	DESCRIPTION	REMARKS	
NEXT ASSY.					
R/W NRZI, BOTH CLOCKS ADJUSTABLE CLOCK PULSE WIDTH = 100ns					
TITLE ASSY., PWB. MFM DATA CONTROL MODEL SF&ST DATE 2/21/78 SHEET 1 OF 1					
1	1	301422-000	Assy, Pwb., MFM Data Control - Basic		
90	2	100234-001	I.C. 9602	B50, E45	
91	4	100243-150	Capacitor, Mica 15pf	C45,50,E47,F47	
92	2	138000-103	Resistor, Variable 10K	C53,E50	
93	2	101156-202	Resistor, 5%,3W 2K	C52,E48	
94	2	101156-222	Resistor, 5%,3W 2.2K	B53,E49	
95	2	101156-562	Resistor, 5%,3W 5.6K	B54,F43	
96	4	300648-001	Jumper, Insulated	Jumper A36 to A37	
			A49 to A50		
			E43 to E44		
			F35 to F34		

FORM 209 (R.9/77)

REV.	PART NUMBER	MATERIAL LIST			
		PART NUMBER	REV.		
	301422-003	C			
TITLE ASSY., PWB. MFM DATA CONTROL MODEL SF&ST DATE 4/21/78 SHEET 1 OF 1					
ITEM NO.	REQD	PART NO.	DESCRIPTION	REMARKS	
1	1	301422-000	Assy, Pwb., MFM Data Control - Basic	REV G	
90					
91					
92					
93					
94					
95	4	300648-001	Jumper, Insulated	Jumper A35 to A36	
			A49 to A47		
			F35 to F33		
			E42 to E44	</td	

REVISIONS				301457
REV.	DESCRIPTION	CHK.	DATE APPROVED	
A	PILOT RELEASE	Am	1-1-76	<i>[Signature]</i>
B	CR/O 6419	Am	4/1/76	<i>[Signature]</i>
B	MFG RELEASE, NO CHANGE	Am	4/1/76	<i>[Signature]</i>
B	CR/O 6585	Am	4/1/76	<i>[Signature]</i>
C	CR/O 7247	-E	4/1/76	<i>[Signature]</i>
X1	EXP AUTO-INSERTION			
C1	CR/O 8120	Am	4/1/76	<i>[Signature]</i>
C2	CR/O 8712	JB	4/1/76	<i>[Signature]</i>
C3	CR/O 9034	P.C	3-22-76	<i>[Signature]</i>
		J.Y	3-22-76	<i>[Signature]</i>



2. SCHEMATIC REF 301458.

(1) MARK APPROPRIATE DASH NO., S/N, AND LATEST REVISION LETTER .12 HIGH CHARACTERS PER SPEC 100037.

NOTES: UNLESS OTHERWISE SPECIFIED

THIS DRAWING CONTAINS PROPRIETARY INFORMATION OF PERKIN-ELMER AND MAY NOT, IN WHOLE OR IN PART, BE DUPLICATED OR DISCLOSED OR USED FOR MANUFACTURE OF ANY PART DISCLOSED HEREIN WITHOUT THE PRIOR WRITTEN PERMISSION OF THE PERKIN-ELMER MEMORY PRODUCTS DIVISION

PART NO. 301457-001 ASSY

PERKIN-ELMER
Memory Products Division

THIS DRAWING CONTAINS PROPRIETARY INFORMATION OF PERKIN-ELMER AND MAY NOT, IN WHOLE OR IN PART, BE DUPLICATED OR DISCLOSED OR USED FOR MANUFACTURE OF ANY PART DISCLOSED HEREIN WITHOUT THE PRIOR WRITTEN PERMISSION OF THE PERKIN-ELMER MEMORY PRODUCTS DIV.

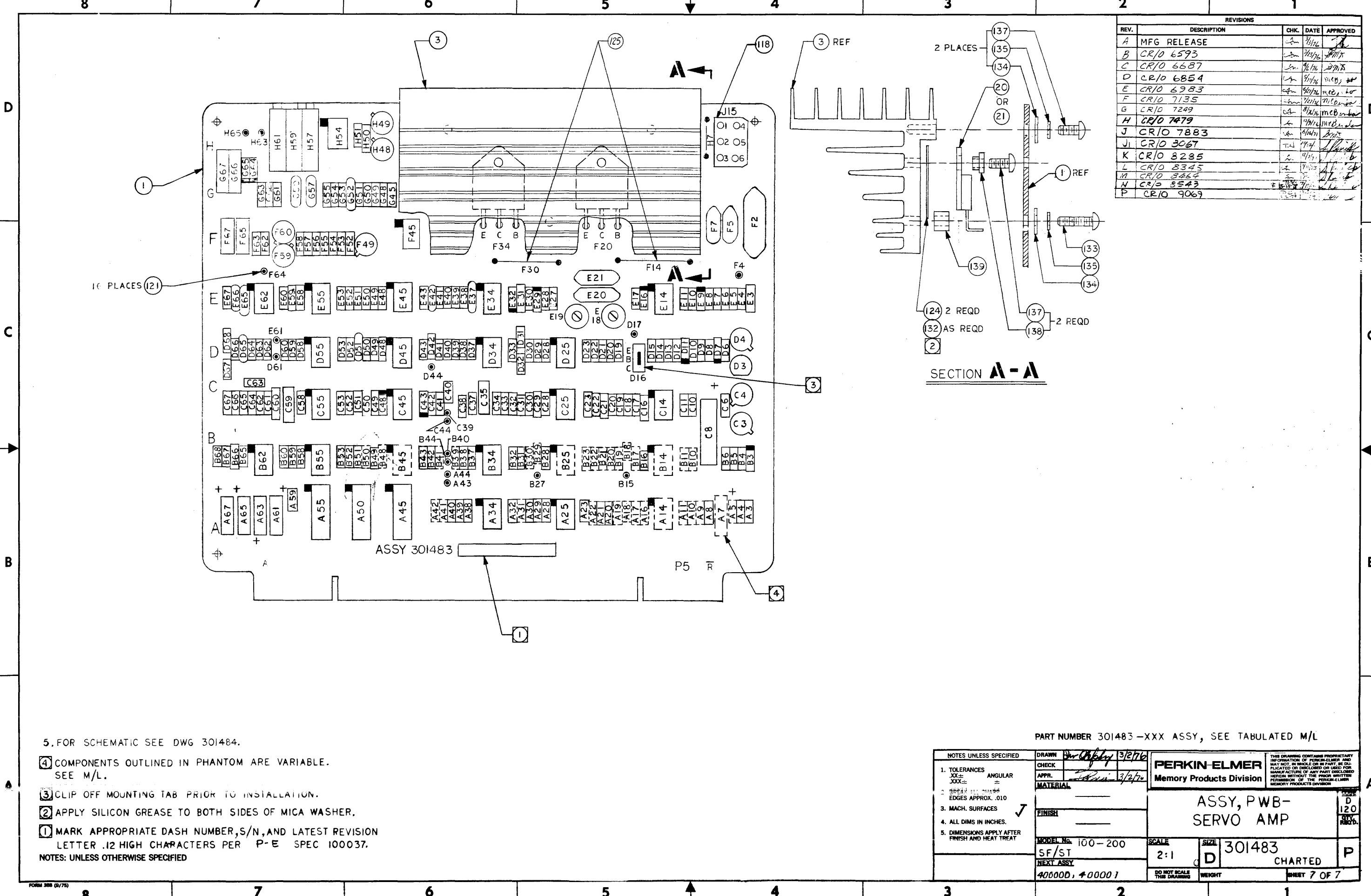
NOTES UNLESS SPECIFIED	DRAWN	S. Olszak	4/20/75
CHECK			
APPR.		J. Jones	2-5-76
MATERIAL			
1. TOLERANCES JXX± ANGULAR JXX± ±			
2. BREAK ALL SHARP EDGES APPROX. .010			
3. MACH. SURFACES ✓			
4. ALL DIMS IN INCHES.			
FINISH			
MODEL No. SF & ST			
SCALE 2:1 SIZE C 301457 C3			
NEXT ASSY 400000 400001			
DO NOT SCALE THIS DRAWING WEIGHT			
SHEET 3 OF 3			

ASSEMBLY, P.W.B.
DETENT AMPLIFIER

D
120
QTY.
REQ'D.

PERKIN ELMER		MATERIAL LIST		PART NUMBER	REV.
Memory Products Division				301457-001	C3
ASSEMBLY, PWB					
DETENT AMPLIFIER		MODEL	SF & ST	DATE	1 OF 3
ITEM NO.	DESCRIPTION	PART NO.	REQD	REV.	ACT. REV.
					REMARKS
					NEXT ASSEMBLY USED ON
					400000, 400001
1	Board, Processed	301456-001	1		
2					
3					
4	IC. LM308	125009-001	3		U1,2,3
5					
6					
7	Capacitor, Mica 10PF	100243-100	5		C1,2,3,4,6
8	Capacitor, Mica .68PF	-680	1		C5
9	Capacitor, Ceramic .01UF	101042-103	6		C8,9,10,12,13,14
10	Capacitor, Tantl 35V 1UF	101003-105	2		C7,11
11					
12					
13	Resistor, 0.1%, 1W 402K	142006-539	2		R1,2
14	Resistor, 5%, " 1.5MEG	101156-155	1		R3
15					
16					
17					
18	Contact FEM PWB MTG	106005-001	7		P14
19	Connector 6 Pin	120907-006	1		J41
20					
21					
22					
23					
24					
25					
	Printed Master	301455	REF		
	Schematic	301458	REF		
	Specification	301487	REF		
	Test Procedure.	900128	REF		

FORM 209 (R12/74)



NO TEMPERATURE COMPENSATION NO TRACK OFFSET						
REV.	PERKIN-ELMER			MATERIAL LIST		CODE D120
	Memory Products Division					REV.
PART NUMBER	301483-001	TITLE	ASSY. PMB SERVO AMP	MODEL	100 TPI SF/SI	DATE 2-16-76 SHEET 1 OF 7
ITEM NO.	DESCRIPTION	PART NO.	REOD	REV.	ACT. REV.	REMARKS
						NEXT ASSEMBLY/USED ON
1	Board Processed	301482-001	1			
2						
3	Heat Sink	301698-001	1			
4						
5						
6	IC	7404	100330-001	1		A50
7	IC	7426	101011-001	2		A45,A55
8	IC	311	101022-001	4		A25,A34,B34,C14
9	IC	1458	101026-001	8		C25,C45,C55,D25,D45,E14, E34,E62,
12	IC	5020	101029-003	5		B62,D55,E45,E55, F45
13	IC	75452	101031-001	1		B55
14	IC	Lowbias	1458	101026-002	2	D34, H54
17	Transistor	2N222A	101052-001	5		C3,D4,F59,F60,H49
18	"	2N2907A	101053-001	3		C4,F49, H48
19	"	MPS-U01A	151002-001	1		D16
20	"	EP2179	151003-001	1		F34
21	"	EP2180	151004-001	1		F20
24	Diode	1N5317	101034-001	6		B3,C43,C48,D7,E9,E16
26	Diode, Zener 5.1V ± 2%		107041-002	1		E29
27	Diode, Zener 6.8V	1N5235B	101058-010	1		D11
28	Diode, Zener 10.0V ± 2%		107041-003	3		E32,G64,G65
29	Diode, SCR	2N5060	161000-001	1		D3
31	Capacitor, Mica	100pf	100243-101	10		C31,C40,C51,C63,D31,D42,D51 D65,E42,E65
32	Capacitor, Mica	220pf	100243-221	1		G52

FORM 209 (R.12/74)

FORM 209 (R.12/74)

MATERIAL LIST				PART NUMBER	REV.
				301483-001	P
TITLE	ASSY. PWB SERVO AMP	MODEL	100TP1 SF/ST	DATE	2-16-76 SHEET 2 OF 7
ITEM NO.	DESCRIPTION	PART NO.	READ REV.	ACT. REV.	REMARKS
					NEXT ASSEMBLY/USED ON
33	Capacitor, Tant. 20V 15uf	101002-156	3		A63,A65,A67
34	Capacitor, " 35V 6.8uf	101003-685	3		A61,F5,F7
35	Capacitor, Poly .022uf	101004-223	1		C59
36	Capacitor, " .0047uf	-472	1		H50
37	Capacitor, " .001uf	101005-102	3		D13,E3,E31
38	Capacitor, Ceramic .01uf	101042-103	21		A23,A59,B16,B49,B65,B67,B68,C16,C21,C23,C29,C38,D49,D32,D48,D58,E17,E37,E65,G57,G59
43	Capacitor, Ceramic .47uf	101086-474	2		D67,G54
44	Capacitor, Poly 1% .01uf	102701-103	5		C35,F65,F67,G66,G67
45	Capacitor, Tant 6V 6.8uf	101001-685	1		C60
46	Capacitor, Tant. 15V 180uf	102761-187	1		C8
47					
48	Capacitor, Ceramic .33uf	101086-334	1		D68
49	" " .1uf	101086-104	1		D22
50	Resistor, Variable 10K	100163-103	3		H57,H59,H61
51	Resistor, Variable 10K	138000-103	2		E18,E19
54	Resistor, 1%, 1W 806	100155-280	1		G55
55	Resistor, " " 1K	-289	1		H51
56	" " " 1.27K	-299	1		D40
57	" " " 2.94K	-334	1		D59
58	" " " 3.32K	-339	1		D23
59	" " " 3.92K	-346	1		A32
60	" " " 6.19K	-365	1		C34
61	" " " 8.06K	-376	2		B31,B37
62	" " " 8.45K	-378	1		G63
63	" " " 10K	-385	6		E48,E50,E52,E53,E67,E30
64	" " " 11K	-389	1		E38
65	" " " 12.1K	-393	1		A30
66	" " " 18.2K	-410	1		D64

FORM 2

TEMPERATURE COMPENSATION TRACK OFFSET					CODE D120	
REV. N	PERKIN-ELMER Memory Products Division	MATERIAL LIST			ASSEMBLY PART NUMBER 301483-002	REV. N
		TITLE ASSY, PMB SERVO AMP	MODEL SF/ST	DATE 3/23/76	SHEET 1 OF 6	
ITEM	REQD.	PART NO.	DESCRIPTION		REMARKS	
1	1	301482-001	Board, Processed			
2						
3	1	301698-001	Heat Sink			
4						
5						
6	1	100330-001	I.C.	7404	A50	
7	2	101011-001	I.C.	7426	A45,55	
8	5	101022-001	I.C.	311	A25,34,B14,34,C14	
9	10	101026-001	I.C.	1458	A14,B25,C25,45,55,D25,45,	
					E14,34,62	
10						
11						
12	6	101029-003	I.C.	5020	B45,62,D55,E45,55,F45	
13	1	101031-001	I.C.	75452	B55	
14	2	101026-002	I.C.	Lowbias 1458	D34, H54	
15						
16						
17	5	101052-001	Transistor	2N222A	C3,D4,F59,60,H49	
18	3	101053-001	Transistor	2N2907A	C4,F49,H48	
19	1	151002-001	Transistor	MPS-U01A	D16	
20	1	151003-001	Transistor	EP2179	F34	
21	1	151004-001	Transistor	EP2180	F20	
22						
23						
24	6	101034-001	Diode	1N5317	B3,C43,48,D7,E9,16	
25						
26	1	107041-002	Diode, Zener	5.1V \pm 2%	E29	
27	1	101058-010	Diode, Zener	6.8V 1N5235B	D11	
28	3	107041-003	Diode, Zener	10.0V \pm 2%	E32,G64,65	
29	1	161000-001	Diode, SCR	2N5060	D3	
30						
31	12	100243-101	Capacitor, Mica	100pf	A10,B18,C31,40,51,63,D31,42,	
					D51,65,E42,66	

FORM 209 (R 3/7)

MATERIAL LIST				PART NUMBER	REV.
				301483-001	P
TITLE		100 TPI SF/ST	DATE	SHEET 3 OF 7	
ITEM NO.	DESCRIPTION	PART NO.	REQD	ACT. REV.	REMARKS
NEXT ASSEMBLY/USED ON					
67	Resistor, 1%, 1W	16.9K	100155-407	2	F62,F63
68	" " "	75K	-469	2	D37,D52
69	" " "	100K	-481	1	G62
70	" " "	1.5K	-306	4	A39,A40,B28,B38
71	" " "	20K	-414	2	A38,B32
72	Resistor, 1%, 1W	280K	100155-524	1	G61
73	Resistor, 1%, 1W	3.01K	100155-335	1	D60
74	Resistor, 5%, 1W	510	101156-511	1	C61
75	Resistor, 3%, 3W	50	101084-004	1	E20
76	" " "	60	-023	1	E21
77	Resistor, 5%, 1W	240	101156-241	1	G51
78	" " "	470	" -471	1	G53
79	Resistor, 5%, 1W	10	101156-100	5	C22,C30,D6,D38,E28
80	" " "	100	-101	1	D10
81	" " "	1K	-102	10	B4,C11,D15,D20,E5,E6,E7,E10, ,G49,G50,
83	Resistor, 5%, 1W	10K	101156-103	8	A29,B6,C10,C18,C19,D9,F56, F57
85	Resistor, 5%, 1W	100K	101156-104	3	C6,D12,E27
86	Resistor, 1%	1.24K	100155-298	1	C62
87	" 5%"	1.2K	101156-122	1	C37
88	" " "	1.5K	-152	10	A8,A20,A21,A28,C67 D39,D43,D62,E60,F52
90	Resistor, 5%, 1W	160K	101156-164	1	B60
91	" " "	1.8K	-182	1	B5
92	" " "	2K	-202	1	E4
93					
94	" " "	200K	-204	1	D14
95					
96	" " "	27K	-273	2	E8,E11
97	" " "	3K	-302	1	A3,
98	" " "	300K	-304	2	D66,E40
99	" " "	4.7K	-472	1	D8

PERKIN-ELMER				ASSEMBLY PART NUMBER	CODE D120
Memory Products Division				REV.	
MATERIAL LIST				301483-002	N
TITLE	ASSY., PWB SERVO AMP	200 TPI	MODEL	SF/ST	DATE 3/23/76 SHEET 2 OF 6
ITEM	REED	PART NO.	DESCRIPTION		REMARKS
32	1	100243-221	Capacitor, Mica	.220pf	G52
33	4	101002-156	Capacitor, Tant 20V	15uf	A7,63,65,67
34	3	101003-685	Capacitor, " 35V	6.8uf	A61,F5,7
35	1	101004-223	Capacitor, Poly	.022uf	C59
36	1	-472	Capacitor, "	.0047uf	H50
37	3	101005-102	Capacitor, "	.001uf	D13,E3,31
38	21	101042-103	Capacitor, Ceramic	.01uf	A23,59,B16,49,65,67,68,C16,21, C23,29,38,49,D32,48,58,E17,37,
					E65,G57,59
39					
40					
41					
42	2	101086-473	Capacitor, Ceramic	.047uf	A18,B29
43	2	101086-474	Capacitor, Ceramic	.47uf	D67,G54
44	5	102701-103	Capacitor, Poly 1%	.01uf	C35,F65,67,G66,67
45	1	101001-685	Capacitor, Tant 6V	6.8uf	C60
46	1	102761-187	Capacitor, Tant 15V	180uf	C8
47					
48	1	101086-334	Capacitor, Ceramic	.33uf	D68
49	1	101086-104	Capacitor, "	.1uf	D22
50	3	100163-103	Resistor, Variable	10K	H57,59,61
51	2	138000-103	Resistor, Variable	10K	E18,19
52					
53					
54	1	100155-280	Resistor, 1%, 1W	806	G55
55	1	-289	Resistor, " "	1K	H51
56	1	-299	Resistor, " "	1.27K	D40
57	1	-334	Resistor, " "	2.94K	D59
58	1	-339	Resistor, " "	3.32K	D23
59	1	-346	Resistor, " "	3.92K	A32
60	1	-365	Resistor, " "	6.19K	C34
61	2	100155-376	Resistor, 1%, 1W	8.06K	B31,37

209 (R 3/77)

MATERIAL LIST						CODE D120
			ASSEMBLY PART NUMBER 301483-002	REV. N		
TITLE	ASSY, PWB SERVO AMP		200 TPI MODEL SF/SI	DATE 3/23/76	SHEET 3 OF 6	
ITEM	REO#	PART NO.	DESCRIPTION		REMARKS	
62	1	100155-378	Resistor, 1%, 1W	8.45K	G63	
63	11	-385	Resistor, " "	10K	A19,22,31,B21,30,E30,48,50, E52,53,67	
64	1	100155-389	Resistor, 1%, 1W	11K	E38	
65	1	-393	Resistor, " "	12.1K	A30	
66	1	-410	Resistor, " "	18.2K	D64	
67	2	-407	Resistor, " "	16.9K	F62,63	
68	2	-469	Resistor, " "	75K	D37,52	
69	1	-481	Resistor, " "	100K	G62	
70	4	-306	Resistor, " "	1.5K	A39,40,B28,38	
71	5	-414	Resistor, " "	20K	A9,11,38,B19,32	
72	1	-524	Resistor, 1%, 1W	280K	G61	
73	1	100155-335	Resistor, 1%, 1W	3.01K	D60	
74	1	101156-511	Resistor, 5%, 1W	510	C61	
75	1	101084-004	Resistor, 3%, 3W	50	E20	
76	1	-023	Resistor, " "	60	E21	
77	1	101156-241	Resistor, 5%, 1W	240	G51	
78	1	-471	Resistor, " "	470	G53	
79	5	101156-100	Resistor, 5%, 1W	10	C22,30,D6,38,E28	
80	1	-101	Resistor, " "	100	D10	
81	10	-102	Resistor, " "	1K	B4,C11,D15,20,E5,6,7,10,G49,50	
82						
83	8	101156-103	Resistor, 5%, 1W	10K	A29,B6,C10,18,19,D9,F56,57	
84						
85	3	101156-104	Resistor, 5%, 1W	100K	C6,D12,E27	
86	1	100155-298	Resistor, 1%, 1W	1.24K	G62	
87	1	101156-122	Resistor, 5%, 1W	1.2K	C37	
88	10	-152	Resistor, 5%, 1W	1.5K	A8,20,21,28,C67,D39,43,62,E60	
					F52	
89						
90	1	101156-164	Resistor, 5%, 1W	160K	B60	

9 (R 3/77)

MATERIAL LIST			
ASSEMBLY PART NUMBER		REV.	CODE
301483-002	N	PERKIN-ELMER Memory Products Division	301483-002 N
200 TPI ASSY, PWB SERVO AMP MODEL SF/ST DATE 3/23/76 SHEET 4 OF 6			
ITEM	REQD	PART NO.	DESCRIPTION
91	1	101156-182	Resistor, 5%, 1W 1.8K B5
92	1	-202	Resistor, " 2K E4
93	1	-203	Resistor, " 20K B11
94	1	-204	Resistor, " 200K D14
95	2	-622	Resistor, " 6.2K A16,B22
96	2	-273	Resistor, " 27K E8,11
97	1	-302	Resistor, " 3K A3
98	2	-304	Resistor, " 300K D66,E40
99	1	-472	Resistor, " 4.7K D8
100	2	-512	Resistor, " 5.1K B23,C28
101	2	-513	Resistor, " 51K C17,D63
102	4	-514	Resistor, " 510K B48,50,E39,D21
103	1	-433	Resistor, " 43K C66
104	14	-752	Resistor, " 7.5K B42,43,51,52,53,58,59,66,D53, E49,51,F54,55,58
105	1	100155-294	Resistor, 1%, 1W 1.13K A5
106	1	-411	Resistor, " 18.7K B20
107	1	-425	Resistor, " 26.1K B10
108	2	101156-155	Resistor, 5%, 1W 1.5Meg F53,G48
109	1	142000-051	Resistor, 1%, 5W 0.2A F2
110	1	101156-911	Resistor, 5%, 1W 910 A4
111	4	100155-548	Resistor, 1%, 1W 499K A41,42,B39,41
112	18	142006-356	Resistor, 1%, 1/8W 4.99K A17,B17,C20,41,42,50,52,64, C65,D19,28,29,49,50,E41,43, E58,59
113			
114			
115	7	142006-385	Resistor, .1%, 1/8W 10K C32,33,53,58,D30,33,41
116			
117			
118	1	100247-013	Connector 6 Pin J15
119			
120			
121	16	100360-001	Pin, Wire Wrap A43,44,B15,27,40,44,C39,44, D17,44,61,E61,F4,64,H63,65
122			
123			
124	2	100147-001	Insulator, Mica Use with F20,F34
125	A/R	100248-922	Wire, Insulated 22GA Jumper Across F14, F30
126			
127	3	300648-001	Jumper, Insulated Jumper J2 A43 to A44
128			
129			
130			
131			
132	A/R	120100-001	Grease - Thermal Joint Apply both sides of item 124
133	1	100036-208	Screw, Pan Hd 4-40 X 7/16"
134	3	100251-200	Washer, Flat, Reduced O.D. No. 4
135	3	100042-200	Washer, Spring Lock No. 4
136			
137	4	100036-204	Screw, Pan Hd 4-40 X 1/4"
138	2	100063-014	Washer, Nylon Shoulder Use with F20, F34
139	1	100093-032	Spacer Use with Heatsink Support Screw
140			
141			
142	2	101086-473	Capacitor, Ceramic .047uf A18,B29
143	2	101086-474	Capacitor, " .4uf D67,G54
144	5	102701-103	Capacitor, Poly 1% .01uf C35,F65,67,G66,67
145	1	101001-685	Capacitor, Tant 6V 6.8uf C60
146	1	102761-187	Capacitor, " 15V 180uf C8
147			
148	1	101086-334	Capacitor, Ceramic .33uf D68
149	1	101086-104	Capacitor, " .1uf D22
150	3	100163-103	Resistor, Variable 10K H57,59,61
151	2	138000-103	Resistor, Variable 10K E18,19
152			
153			
154	1	100155-280	Resistor, 1%, 1W 806 G55
155	1	-289	Resistor, " 1K H51
156	1	-299	Resistor, " 1.27K D40
157	1	-334	Resistor, " 2.94K D59
158	1	-339	Resistor, " 3.32K D23
159	1	-346	Resistor, " 3.92K A32
160	1	-365	Resistor, " 6.19K C34
161	2	100155-376	Resistor, 1%, 1W 8.06K B31,37
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REVISIONS				301632-100
REV.	DESCRIPTION	CHK.	DATE APPROVED	
A	PILOT REL.	DAN	10/17/78	Herman

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3. FOR SCHEMATIC SEE 301633.

(2) COMPONENTS OUTLINED IN PHANTOM ARE VARIABLE SEE M/L.

(1) MARK APPROPRIATE DASH NUMBER AND LATEST REVISION LETTER .12 WHITE CHARACTERS PER P.A. SPEC.100037

NOTES: UNLESS OTHERWISE SPECIFIED

NOTES UNLESS SPECIFIED

1 TOLERANCES
XX ANGULAR
XXX

2 BREAK ALL SHARP EDGES APPROX 010

3 MACH SURFACES

4 ALL DIMS IN INCHES

5 DIMENSIONS APPLY AFTER FINISH AND HEAT TREAT

DRAWN DAN.SIERRA 9-28-79

CHECK *W.L. Gandy* 10/17/78

APPR. *L. Lewis* 10/17/78

MATERIAL

FINISH

MODEL No. SUPER F & T

NEXT ASSY

ASSEMBLY PWB
DISC CONTROL

CODE D 120 QTY REQ'D

SCALE - SIZE C 301632-100 REV. A

DO NOT SCALE THIS DRAWING CODE IDENT 52465 SHEET 1 OF 1

PERKIN ELMER MATERIAL LIST											
PART NUMBER	REV.	CODE D120		PART NUMBER	REV.	CODE D120					
Memory Products Division				Memory Products Division							
ASSY. PWB. DISC CONTROL				ASSY. PWB. DISC CONTROL							
MODEL SUPER F&T		MODEL SUPER F&T		DATE 4-22-76		DATE 4-22-76					
SHEET 1 OF 3		SHEET 2 OF 3		SHEET 3 OF 3							
ITEM NO.	DESCRIPTION	PART NO.	REOD REV.	ACT. REV.	REMARKS	ITEM NO.	DESCRIPTION	PART NO.	REOD REV.	ACT. REV.	REMARKS
					NEXT ASSEMBLY/USED ON 400000, 400001						NEXT ASSEMBLY/USED ON
1	Board, Processed	301631-001				33	Capacitor, Poly .0022uf	101004-222	1		A2
2						34	Capacitor, " .0047uf	-472	1		B11
3	I.C. 311	101022-001	1		A40	35	Capacitor, " .0068uf	-682	1		A53
4						36	Capacitor, Cer. 100V .01uf	101042-103	23		A16..18,43,46,52,72,82,94, B49,C12,D42,D51,82,91,E81, E82,92,F14,22,42,52,72,82
5	I.C. 1458	101026-001	1		A15	37	Capacitor, Poly .015uf	101004-153	1		A4
6	I.C. 74LS00	123029-001	1		B70	38	Capacitor, " .033uf	-333	1		B48
7	I.C. 74LS02	123030-001	1		D40	39					
8	I.C. 74LS08	123032-001	3		A70,C80,D10	40	Capacitor, Cer. 50V .1uf	101087-104	1		B22
9	I.C. 74LS10	123033-001	1		C70	41	Capacitor, Tant. 35V 1uf	101003-105	2		C3,79
10	I.C. 74LS11	123034-001	2		D70,E40	42	Capacitor, " 20V 2.2uf	101002-225	2		C6,F85
11	I.C. 74LS32	123035-001	1		D50	43	Capacitor, " 6V 6.8uf	101001-685	1		B19
12	I.C. 74LS74	123036-001	6		B80,C40,E50,F40,50,70	44	Capacitor, " 20V 15uf	101002-156	1		F1
13	I.C. 74LS123	123039-001	3		B40,C50,90	45	Capacitor, " 6V 56uf	101001-566	3		C48,60,86
14	I.C. 74LS193	123041-001	2		A80,D90	46	Capacitor, Mica.500V 82pf	100243-820	1		D43
15	I.C. 74LS293	123042-001	3		D80,E80,F80	47	Crystal 8.00MHz	106500-001	1		F97
16	I.C. 74LS221	123043-001	1		A50	48					
17	I.C. 74LS14	123047-001	2		C10,E10	49	Resistor, Variable 50K	100163-503	1		B95
18	I.C. 74LS20	123048-001	1		E70	50					
19	I.C. 74LS192	123049-001	1		E90	51	Resistor, 3%,3W 10	101084-003	1		D1
20	I.C. 74221	123155-001	1		B50	52	Resistor, 5%,1W 62	101156-620	2		C2,E1
21						53	Resistor, " 75	-750	1		E4
22	Transistor 2N222A	101052-001	5		B9,05,E2,45,85	54	Resistor, " 100	-101	2		B2,E94
23						55	Resistor, " 510	-511	3		A12..,E89,F94
24						56	Resistor, " 1K	-102	4		A45,E53,97,C5
25	Diode 1N5317	101034-001	2		A11,E86	57	Resistor, " 1.5K	-152	1		D4
26	Diode, Zener 4.7V 1N5230B	101058-005	2		B7,C43	58	Resistor, " 2K	-202	4		A6,60,D45,E3
27	Diode, Zener 5.1V 1N5231B	" -006	1		B23	59	Resistor, " 3K	-302	1		F95
28	Capacitor, Mica 62pf	100243-620	2		F91,96	60	Resistor, " 4.3K	-432	1		A13
29	Capacitor, " 270pf	" -271	5		A49,B60,C9,D11,F75	61	Resistor, " 5.1K	-512	3		A3,B43,C44
30	Capacitor, " 510pf	" -511	1		E51	62	Resistor, 5%,1W 8.2K	-822	1		A5
31	Capacitor, " 620pf	" -621	1		F60	62A	Resistor, 5%,1W 150	101156-151	1		D12

FORM 209 (R12/74)

2315 TYPE CARTRIDGE

FRONT LOAD
2400RPM 5 us Index and Sector Pulse Width

PERKIN ELMER MATERIAL LIST											
PART NUMBER	REV.	CODE D120		PART NUMBER	REV.	CODE D120					
Memory Products Division				Memory Products Division							
ASSY. PWB. DISC CONTROL				ASSY. PWB. DISC CONTROL							
MODEL SF		MODEL ST		DATE 4-28-76		DATE 4-28-76					
SHEET 1 OF 1		SHEET 1 OF 1		SHEET 1 OF 1							
ITEM NO.	DESCRIPTION	PART NO.	REOD REV.	ACT. REV.	REMARKS	ITEM NO.	DESCRIPTION	PART NO.	REOD REV.	ACT. REV.	REMARKS
					NEXT ASSEMBLY/USED ON						NEXT ASSEMBLY/USED ON
81						81					
82	Resistor, " 3K	101156-302	2		A51,B53	82	Resistor, " 3K	101156-302	2		A51,B53
83						83					
84	Capacitor, Poly .0022uf	101004-222	2		A47,B68	84					
85	" .068uf	-683	1		B45	85	" .068uf	-683	1		B45
86						86					
87	Wire, Jumper	300648-001	2		Jumper J1 B15 to B16 J2 B17 to B18	87	Wire, Jumper	300648-001	2		Jumper J1 B15 to B16 J2 B17 to B18
95	Switch, Rocker	149002-008	1		B90	95	Switch, Rocker	149002-008	1		B90

FORM 209 (R12/74)

PERKIN ELMER MATERIAL LIST											
PART NUMBER	REV.	CODE D120		PART NUMBER	REV.	CODE D120					
Memory Products Division				Memory Products Division							
ASSY. PWB. DISC CONTROL				ASSY. PWB. DISC CONTROL							
MODEL SF		MODEL ST		DATE 4-28-76		DATE 4-28-76					
SHEET 1 OF 1		SHEET 1 OF 1		SHEET 1 OF 1							
ITEM NO.	DESCRIPTION	PART NO.	REOD REV.	ACT. REV.	REMARKS	ITEM NO.	DESCRIPTION	PART NO.	REOD REV.	ACT. REV.	REMARKS
					NEXT ASSEMBLY/USED ON						NEXT ASSEMBLY/USED ON
81						81					
82	Resistor, " 3K	101156-302	2		A51,B53	82	Resistor, " 3K	101156-302	2		A51,B53
83						83					
84	Capacitor, Poly .0022uf	101004-222	2		A47,B68	84					
85	" .068uf	-683	1		B45	85	Capacitor, Poly .068uf	101004-683	1		B45
86						86					
87	Wire, Jumper	300648-001	2		Jumper J1 B15 to B16 J2 B17 to B18	87	Wire, Jumper	300648-001	1		Jumper J1 B15 to B16 J2 B17 to B18
95	Switch, Rocker	149002-008	1		B90	95	Switch, Rocker	149002-008	1		B90

FORM 209 (R12/74)

PERKIN ELMER MATERIAL LIST											
PART NUMBER	REV.	CODE D120		PART NUMBER	REV.	CODE D120					
Memory Products Division				Memory Products Division							
ASSY. PWB. DISC CONTROL				ASSY. PWB. DISC CONTROL							
MODEL SF		MODEL ST		DATE 4-28-76		DATE 4-28-76					
SHEET 1 OF 1		SHEET 1 OF 1		SHEET 1 OF 1							
ITEM NO.	DESCRIPTION	PART NO.	REOD REV.	ACT. REV.	REMARKS	ITEM NO.	DESCRIPTION	PART NO.	REOD REV.	ACT. REV.	REMARKS
					NEXT ASSEMBLY/USED ON						NEXT ASSEMBLY/USED ON
81						81					
82	Resistor, " 3K	101156-302	2		A51,B53	82	Resistor, " 3K	101156-302	2		A51,B53
83						83					
84	Capacitor, Poly .0022uf	101004-222	2		A47,B68	84					
85	" .068uf	-683	1		B45	85	Capacitor, Poly .068uf	101004-683	1		B45
86						86					
87	Wire, Jumper	300648-001	2		Jumper J1 B15 to B16 J2 B17 to B18	87	Wire, Jumper	300648-001	1		Jumper J1 B15 to B16 J2 B17 to B18
95	Switch, Rocker	149002-008	1		B90	95	Switch, Rocker	149002-008	1		B90

FORM 209 (R12/74)

PERKIN ELMER MATERIAL LIST							
PART NUMBER	REV.	CODE D120		PART NUMBER	REV.	CODE D120	
Memory Products Division							

TOP LOAD. 544D TYPE CARTRIDGE
2400 RPM 500 ns Index and Sector Pulse Width.

MATERIAL LIST					
PERKIN ELMER			Memory Products Division		
PART NUMBER	REV.	PART NUMBER	REV.	PART NUMBER	REV.
301632-006 L					
TITLE ASSY. PWB. DISC CONTROL. MODEL ST. DATE 4/28/76 SHEET 1 OF 1					
ITEM NO.	DESCRIPTION	PART NO.	REQD	ACT. REV.	REMARKS
NEXT ASSEMBLY/USED ON AND ADD THE FOLLOWING:					
81					
82	Resistor, " " 3K	101156-302	2		A51,B53
83					
84					
85	Capacitor, Poly. .068uf	101004-683	1		B45
86					
87	Wire, Jumper.	300648-001	2		Jumper J1 B15 to B16. J2 B17 to B18.
95	Switch, Rocker	149002-008	1		B90

FORM 209 (R.12/74)

FRONT LOAD. 2315 TYPE CARTRIDGE
1500 RPM 10 us Index and Sector Pulse Width.

MATERIAL LIST					
PERKIN-ELMER			Memory Products Division		
PART NUMBER	REV.	PART NUMBER	REV.	PART NUMBER	REV.
301632-007 L					
TITLE ASSY. PWB. DISC CONTROL. MODEL SF. DATE 4/28/76 SHEET 1 OF 1					
ITEM NO.	DESCRIPTION	PART NO.	REQD	ACT. REV.	REMARKS
NEXT ASSEMBLY/USED ON AND ADD THE FOLLOWING:					
81					
82	Resistor, " " 3K	101156-302	2		A51,B53
83					
84	Capacitor, Poly. .0039uf	101004-392	2		A47,B68
85	" " .068uf	-683	1		B45
86					
87	Wire, List.	300648-001	1		Jumper J1 B14 to B15. J2 B17 to B18.
95	Switch, Rocker	149002-008	1		B90

FORM 209 (R.12/74)

FRONT LOAD. 2315 TYPE CARTRIDGE
2400 RPM 10 us Index and Sector Pulse Width.

MATERIAL LIST					
PERKIN-ELMER			Memory Products Division		
PART NUMBER	REV.	PART NUMBER	REV.	PART NUMBER	REV.
301632-008 L					
TITLE ASSY. PWB. DISC CONTROL. MODEL SF. DATE 4/28/76 SHEET 1 OF 1					
ITEM NO.	DESCRIPTION	PART NO.	REQD	ACT. REV.	REMARKS
NEXT ASSEMBLY/USED ON AND ADD THE FOLLOWING:					
81					
82	Resistor, " " 3K	101156-302	2		A51,B53
83					
84	Capacitor, Poly. .0039uf	101004-392	2		A47,B68
85	" " .068uf	-683	1		B45
86					
87	Wire, Jumper.	300648-001	2		Jumper J1 B14 to B15. J2 B17 to B18.
95	Switch, Rocker	149002-008	1		B90

FORM 209 (R.12/74)

TOP LOAD. 5440 TYPE CARTRIDGE
2400 RPM 10 us Index and Sector Pulse Width.

MATERIAL LIST					
PERKIN ELMER			Memory Products Division		
PART NUMBER	REV.	PART NUMBER	REV.	PART NUMBER	REV.
301632-009 L					
TITLE ASSY. PWB. DISC CONTROL. MODEL ST. DATE 4/28/76 SHEET 1 OF 1					
ITEM NO.	DESCRIPTION	PART NO.	REQD	ACT. REV.	REMARKS
NEXT ASSEMBLY/USED ON AND ADD THE FOLLOWING:					
81					
82	Resistor, " " 3K	101156-302	2		A51,B53
83					
84	Capacitor, Poly. .0039uf	101004-392	2		A47,B68
85	" " .068uf	-683	1		B45
86					
87	Wire, Jumper.	300648-001	2		Jumper J1 B15 to B16. J2 B17 to B18.
95	Switch, Rocker	149002-008	1		B90

FORM 209 (R.12/74)

FRONT LOAD. 2315 TYPE CARTRIDGE
1500 RPM 40 us Index and Sector Pulse Width.

MATERIAL LIST					
PERKIN ELMER			Memory Products Division		
PART NUMBER	REV.	PART NUMBER	REV.	PART NUMBER	REV.
301632-010 L					
TITLE ASSY. PWB. DISC CONTROL. MODEL SF. DATE 4/28/76 SHEET 1 OF 1					
ITEM NO.	DESCRIPTION	PART NO.	REQD	ACT. REV.	REMARKS
NEXT ASSEMBLY/USED ON AND ADD THE FOLLOWING:					
81					
82	Resistor, " " 3K	101156-302	2		A51,B53
83					
84	Capacitor, Poly. .018uf	101004-183	2		A47,B68
85	Capacitor, " .068uf	-683	1		B45
86					
87	Wire, Jumper.	300648-001	1		Jumper J1 B14 to B15. J2 B17 to B18.
95	Switch, Rocker	149002-008	1		B90

FORM 209 (R.12/74)

FRONT LOAD. 2315 TYPE CARTRIDGE
2400 RPM 40 us Index and Sector Pulse Width.

MATERIAL LIST					
PERKIN-ELMER			Memory Products Division		
PART NUMBER	REV.	PART NUMBER	REV.	PART NUMBER	REV.
301632-011 L					
TITLE ASSY. PWB. DISC CONTROL. MODEL SF. DATE 4/28/76 SHEET 1 OF 1					
ITEM NO.	DESCRIPTION	PART NO.	REQD	ACT. REV.	REMARKS
NEXT ASSEMBLY/USED ON AND ADD THE FOLLOWING:					
81					
82	Resistor, " " 3K	101156-302	2		A51,B53
83					
84	Capacitor, Poly. .018uf	101004-183	2		A47,B68
85	" " .068uf	-683	1		B45
86					
87	Wire, Jumper.	300648-001	2		Jumper J1 B14 to B15. J2 B17 to B18.
Rework Instructions 302171-001 0					
95	Switch, Rocker	149002-008	1		B90

FORM 209 (R.12/74)

TOP LOAD. 5440 TYPE CARTRIDGE
2400 RPM 40 us Index and Sector Pulse Width.

MATERIAL LIST					
PERKIN-ELMER			Memory Products Division		
PART NUMBER	REV.	PART NUMBER	REV.	PART NUMBER	REV.
301632-012 L					
TITLE ASSY. PWB. DISC CONTROL. MODEL ST. DATE 4/28/76 SHEET 1 OF 1					
ITEM NO.	DESCRIPTION	PART NO.	REQD	ACT. REV.	REMARKS
NEXT ASSEMBLY/USED ON AND ADD THE FOLLOWING:					
81					
82	Resistor, " " 3K	101156-302	2		A51,B53
83					
84	Capacitor, Poly. .018uf	101004-183	2		A47,B68
85	" " .068uf	-683	1		B45
86					
87	Wire, Jumper.	300648-001	2		Jumper J1 B15 to B16. J2 B17 to B18
Rework Instructions 302171-001 0					
95	Switch, Rocker	149002-008	1		B90

FORM 209 (R.12/74)

TOP LOAD. 5440 TYPE CARTRIDGE
1500 RPM 5 us Index and Sector Pulse Width 48 or 50 Sector Cartridge.

MATERIAL LIST					
PERKIN-ELMER			Memory Products Division		
PART NUMBER	REV.	PART NUMBER	REV.	PART NUMBER	REV.
301632-013 L					
TITLE ASSY. PWB. DISC CONTROL. MODEL ST. DATE 4/28/76 SHEET 1 OF 1					
ITEM NO.	DESCRIPTION	PART NO.	REQD	ACT. REV.	REMARKS
NEXT ASSEMBLY/USED ON AND ADD THE FOLLOWING:					
81					
82	Resistor, " " 3K	101156-302	2		A51,B53
83					
84	Capacitor, Poly. .0022uf	101004-222	2		A47,B68
85					
86	Capacitor, Poly. .033uf	101004-333	1		B45
87	Wire, Jumper.	300648-001	1		Jumper J1 B15 to B16
95	Switch, Rocker	149002-008	1		B90

FORM 209 (R.12/74)

TOP LOAD. 2400 RPM 5 us Index and Sector Pulse Width 48 to 50 Sector Cartridge.						CODE D120
PERKIN ELMER Memory Products Division			MATERIAL LIST			PART NUMBER 3U1632-014
REV. J						REV. L
TITLE - ASSY. PWB. DISC CONTROL.			MODEL	ST.	DATE 4/28/76	SHEET 1 OF 1
PART NUMBER 301632-014	ITEM NO.	DESCRIPTION	PART NO.	REQD	ACT REV. 1	REMARKS
	NEXT ASSEMBLY USED ON					
	USE MATERIAL LIST AND ADD THE FOLLOWING:					
81		301632-000		1		
82	Resistor, " " 3K	101156-302	2		A51,B53	
83						
84	Capacitor, Poly. .0022uf	101004-222	2		A47,B68	
85						
86	Capacitor, Poly .033uf	-333	1		B45	
87	Wire, Juniper.	300648-001	2		Jumper J1 B15 to B16	
					J2 B17 to B18	
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95	Switch, Rocker	149002-008	1		B90	
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FORM 209 (R.12/74)

TOP LOAD, 5440 TYPE CARTRIDGE 1500 RPM 40 us Index and Sector Pulse Width.		CODE D12	
PERKIN ELMER Memory Products Division		MATERIAL LIST	
		PART NUMBER 301632-018	REV. C
TITLE ASSY. PWB. DISC CONTROL.		MODEL ST.	DATE 4/28/76 SHEET 1 OF 1
PART NUMBER 301C32-018	ITEM NO. DESCRIPTION USE MATERIAL LIST AND ADD THE FOLLOWING:	PART NO. 301632-000	REQD REV ACT. REV. NEXT ASSEMBLY USED ON
81			
82	Resistor, " " 3K	101156 -302	2 A51,B53
83			
84	Capacitor, Poly. .018uf	101004-183	2 A47,B68
85	" " .068uf	-683	1 B45
86			
87	Wire, Jumper.	300648-001	1 Jumper J1 B15 to B16
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95	Switch, Rocker	149002-008	1 B90
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FORM 209 (R.12/74)

TOP LOAD. 5440 TYPE CARTRIDGE 1500 5 us Index and Sector Pulse Width.		CODE D120			
PERKIN ELMER Memory Products Division		MATERIAL LIST	PART NUMBER 301632-015		
TITLE ASSY. PWB. DISC CONTROL.		MODEL	REV. L		
		ST.	DATE 4/28/76 SHEET 1 OF 1		
ITEM NO.	DESCRIPTION	PART NO.	REQD REV.	ACT. REV.	REMARKS
USE MATERIAL LIST AND ADD THE FOLLOWING:		301632-000		L	NEXT ASSEMBLY/USED ON
81					
82	Resistor, " " 3K	101156-302	2		A51,B53
83					
84	Capacitor, Poly. .0022uf	101004-222	2		A47,B68
85	" " .068uf	-683	1		B45
86					
87	Wire, Jumper.	300648-001	1		Jumper J1 B15 to B16
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95	Switch, Rocker	149002-008	1		B90
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FORM 209 (F)

FORM 209 (R.12/74)

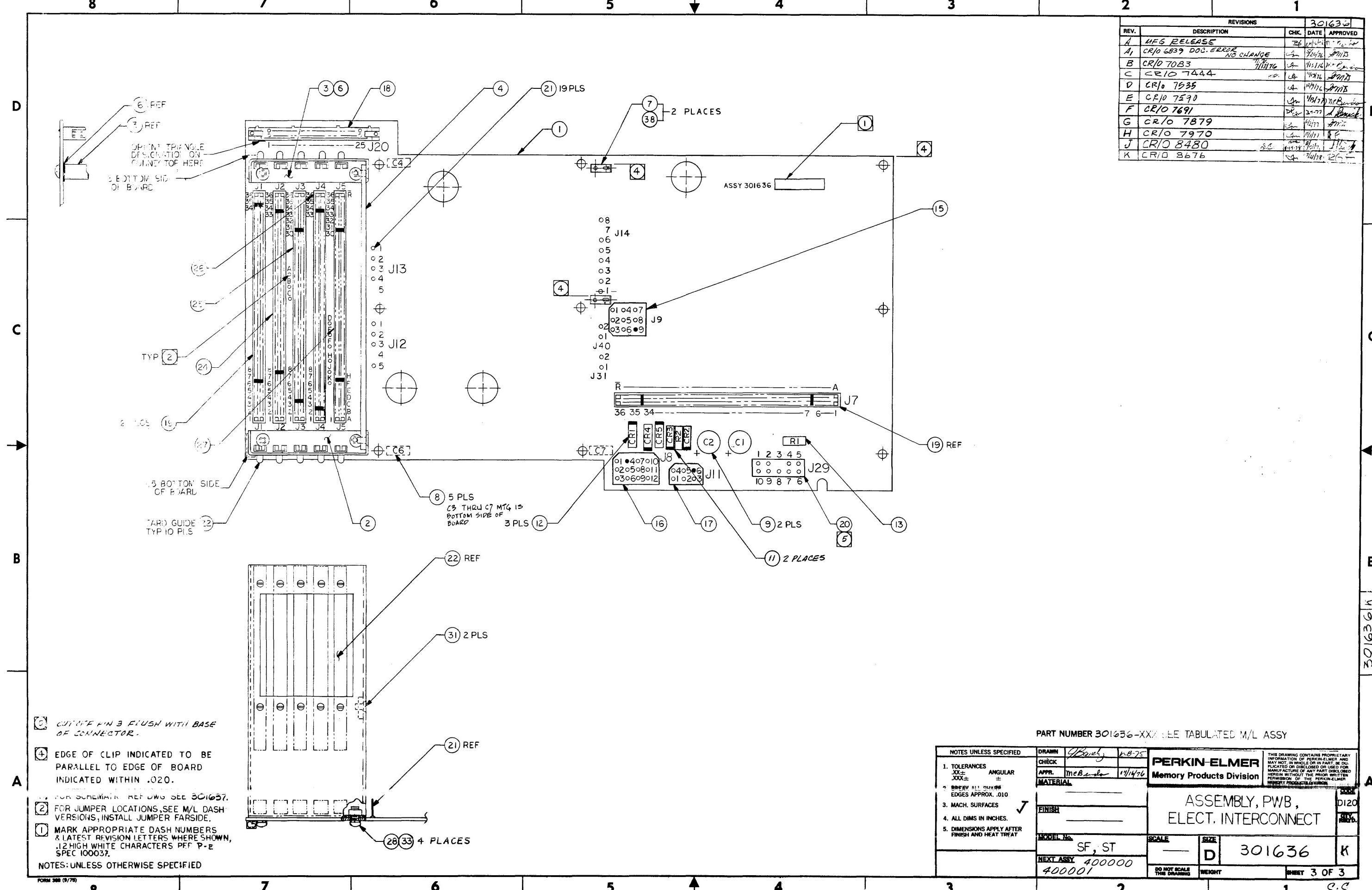
TOP LOAD. 5440 TYPE CARTRIDGE 1500 10 us Index and Sector Pulse Width.		CODE D120				
PERKIN-ELMER Memory Products Division		MATERIAL LIST				
		PART NUMBER 301632-017				
TITLE ASSY. PWB. DISC CONTROL.		MODEL				
ST.		DATE 4/28/76				
		SHEET 1 OF 1				
ITEM NO.	DESCRIPTION	PART NO.	PIECES	ACT REV.	REV.	REMARKS
	USE MATERIAL LIST AND ADD THE FOLLOWING:	301632-000		L.		NEXT ASSEMBLY/USED ON
81						
82	Resistor, " " 3K	101156-302	2			A51,B53
83						
84	Capacitor, Poly. .0039uf	101004-392	2			A47,B68
85	" " .068uf	-683	1			B45
86						
87	Wire, Jumper.	300648-001	1			Jumper J1 B15 to B16
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95	Switch, Rocker	149002-008	1			B90
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FORM 209 (R.1)

C 301632-021	FIRST RELEASE NOT TO BE USED FOR THE MANUFACTURE OF PIECES ONLY		PERKIN-ELMER Memory Products Division		
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	Top Load, 2400RPM 5us Index & Sector Pulse Width 48 to 50 Sector Cartridge ASSY., PWB, DISC CONTROL		MODEL	ST	DATE 3/15/78
	PART NO.	DESCRIPTION			
1	301632-000	Assy, Pwb., Disc Control - Basic	S16		
81					
82	2 101156-302	Resistor, 5%, 1/4W	3K	A51,B53	
83					
84	2 101004-222	Capacitor, Poly.	.0022uf	A47,B68	
85					
86	1 101004-333	Capacitor, Poly.	.033uf	B45	
87	2 300648-001	Wire, Jumper		Jumper J1 B15 to B16	
				J2 B17 to B18	
95	1 120909-001	Header, Programmed		B90	
96	1 120910-061	Cover, Header			
A	MECH E&L				
B	CDU 5625				
C	CRO 8939				

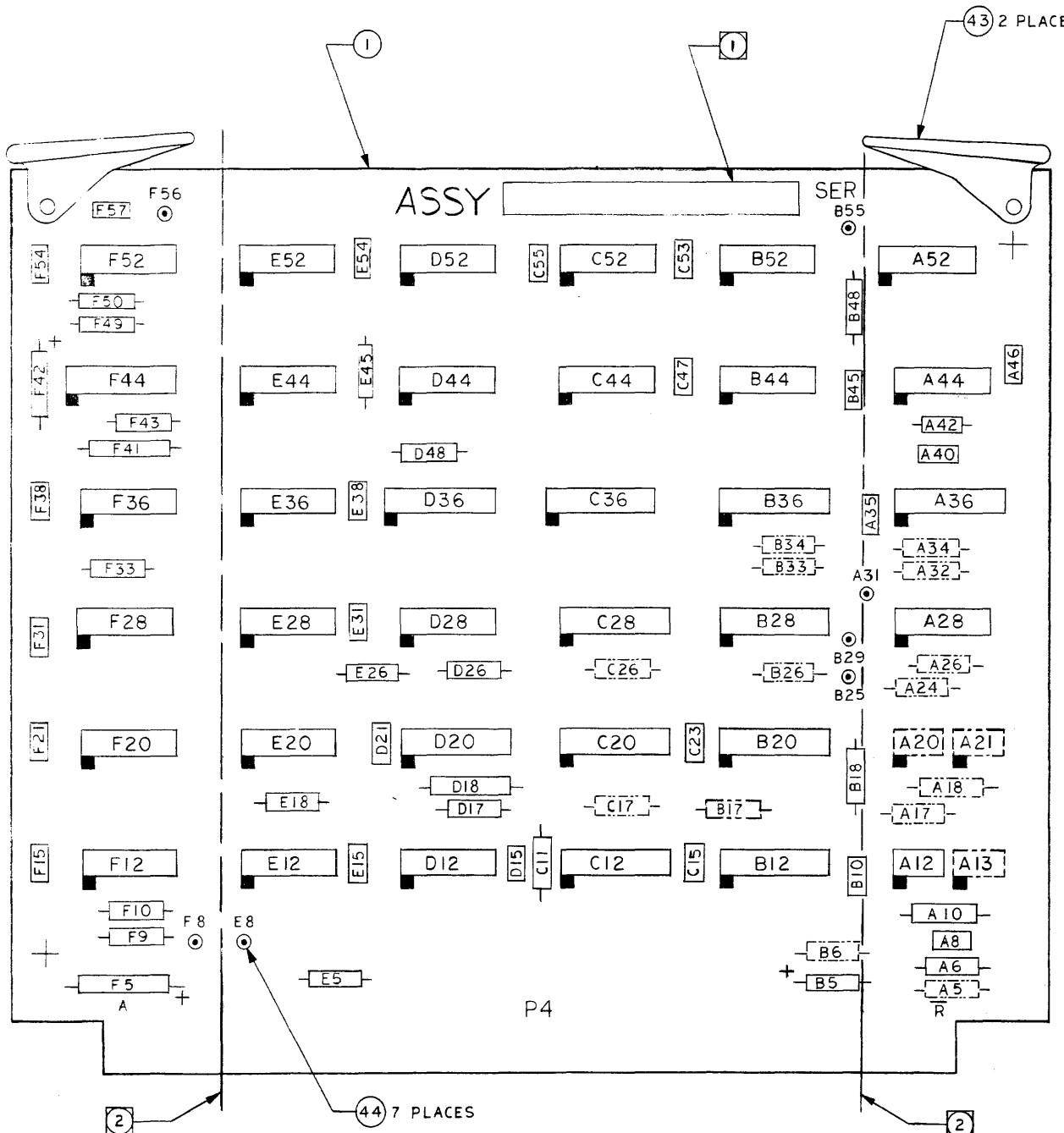
FORM 209 (R 9/77)

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PERKIN ELMER		MATERIAL LIST			PART NUMBER	
Memory Products Division					301636-000	K
ITEM NO.	TITLE	ASSEMBLY, PWB. ELECTRONICS INTERCONNECT	MODEL	SF & ST	DATE	REV.
					4-15-76	SHEET 1 OF 3
ITEM NO.	DESCRIPTION	PART NO.	RECD	REV.	ACT. REV.	REMARKS
						NEXT ASSEMBLY/USED ON
1	Board, Processed	301635-001	1	R		
2	End, Card Cage	302112-001	1			
3	End, "	-002	1			
4	"	302112-001	1			
5						
6	Insulator, Card Cage	301447-001	2			
7	Clip, Retaining - PWB	301575-001	2			
8	Capacitor .1 uf	101037-104	5		C3,4,5,6,7	
9	Capacitor 470 uf	102600-001	2		C1,C2	
10						
11	Diode 1N4003	100127-001	2		CR2,3	
12	Diode 1N5624	107026-001	3		CR1,4,5	
13	Resistor, 5% 1W 5.1K	101156-512	1		R1	
14	Resistor, 5% 1W 10K	101156-103	1		R2	
15	Connector, 9 Pin	100247-001	1		J9	
16	Connector, 12 "	-012	1		J8	
17	Connector, 6 "	-013	1		J11	
18	Connector, 50 "	101040-001	1		J20	
19	Connector, 72 "	105024-001	2		J1,7	
20	Connector, Header, 10 Pin	120905-001	1		J29	
21	Pin, Wire Wrap	100360-003	19		J12,13,14,31,40	
22	Guide, Card	101064-001	10			
23						
24	Connector 72 Pins	105024-002	1		J2	
25	Connector 72 Pins	-006	1		J3	
26	Connector 72 Pins	-007	1		J4	
27	Connector 72 Pins	-008	1		J5	
28	Screw, Pan Head	100036-305	4		6-32 x 5/16"	
29						
30						
31	Screw, Flat Head, 82°	100040-304	2		6-32 x 1/2	
32						

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SCHEMATIC REF 301688

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SEE MIL

MAX HEIGHT OF ALL COMPONENTS WITHIN AREA OF DOTTED
LINES TO BOARD EDGE SHALL BE 5/16 MAX. DISC TYPE
CAPACITORS MOUNTED IN THIS AREA SHALL BE ASSEMBLED
LEANING AWAY FROM EDGES OF BOARD.

MARK APPROPRIATE DASH NO., S/N, AND LATEST REVISION
LETTER .12 HIGH CHARACTERS PER P-E SPEC 100037.

NOTES: UNLESS OTHERWISE SPECIFIED

PART NUMBER 301687-XXX SEE TABULATED MIL

NOTES UNLESS SPECIFIED	DRAWN	ZUCKERMAN APR '76
1. TOLERANCES \pm .005 ANGULAR \pm .005	CHECK	<i>John W. Zuckerman</i> 3/10/76
2. DOTTED LINES GUARDED EDGES APPROX. .010	APPR.	<i>J. Zuckerman</i> 3-12-77
3. MACH. SURFACES	MATERIAL	PERKIN-ELMER
4. ALL DIMS IN INCHES.		Memory Products Division
5. DIMENSIONS APPLY AFTER FINISH AND HEAT TREAT	FINISH	ASSEMBLY, PWB
	MODEL No.	SERVO LOGIC
	SF/ST	CODE D
	SCALE 4:1	SIZE D
	NEXT ASSY 400001	301687
	DO NOT SCALE THIS DRAWING	CHARTED
	WEIGHT	SHEET 3 OF 3

PERKIN-ELMER MATERIAL LIST					
Memory Products Division		PART NUMBER	REV.	CODE D120	
		301687-000	C		
ITEM NO.	DESCRIPTION	PART NO.	REQD	ACT. REV.	REMARKS
NEXT ASSEMBLY USED ON					
1	Board, Processed	301686-001	1		
2					
3	I.C. 1458	101026-001	1		A12.
4	I.C. 1406	101088-001	1		A44.
5	I.C. 74LS00	123029-001	1		D28.
6	I.C. 74LS04	123030-001	1		E28.
7	I.C. 74LS04	123031-001	2		D12,E44.
8	I.C. 74LS04	123032-001	4		A52,C52,E52,F12.
9	I.C. 74LS10	123033-001	1		E12.
10	I.C. 74LS11	123034-001	3		B52,D52,F20.
11	I.C. 74LS32	123035-001	2		A28,F52.
12	I.C. 74LS74	123036-001	4		D44,L20,F28,F36.
13	I.C. 74LS86	123038-001	3		B44,C44,E36
14	I.C. 74LS123	123039-001	2		D20,F44.
15	I.C. 74LS157	123040-001	2		B12,C12.
16	I.C. 74LS193	123041-001	3		B36,C36,D36.
17	I.C. 74LS283	123044-001	3		A36,B28,C28.
18	I.C. 74LS175	123045-001	2		B20,C20
19					
20					
21	Capacitor, Mica .33pf	100243-330	1		B45.
22	Capacitor, " .470pf	-471	1		F57.
23	Capacitor, Poly .0015uf	101005-152	1		F41.
24	Capacitor, " .0047uf	101004-472	1		D18.
25	Capacitor, " .01uf	-103	1		A10.
26	Capacitor, Ceramic 100V .01uf	101042-103	20		A8,35,40,46,B10,C15,23,47, C53,55,D15,E15,31,38,54, F15,Z1,31,38,54
27	Capacitor, Ceramic 50V .1uf	101086-104	1		D21.
28	Capacitor, Tant. 20V 2.2uf	101002-225	1		F42.
29	Capacitor, " 20V 15uf	101002-156	1		B5

FORM 209 (R.12/74)

100TPI 203 Tracks

PERKIN-ELMER MATERIAL LIST					
Memory Products Division		PART NUMBER	REV.	CODE D120	
		301687-003	E		
ITEM NO.	DESCRIPTION	PART NO.	REQD	ACT. REV.	REMARKS
NEXT ASSEMBLY USED ON					
USE MATERIAL LIST AND ADD THE FOLLOWING:					
63	Wire, Jumper	300648-001	2		Jumper A31 to B25. Jumper E8 to F8.
64	Wire, Solid Insulated	100248-924	A/R		Jumper Across A17.

FORM 209 (R.12/74)

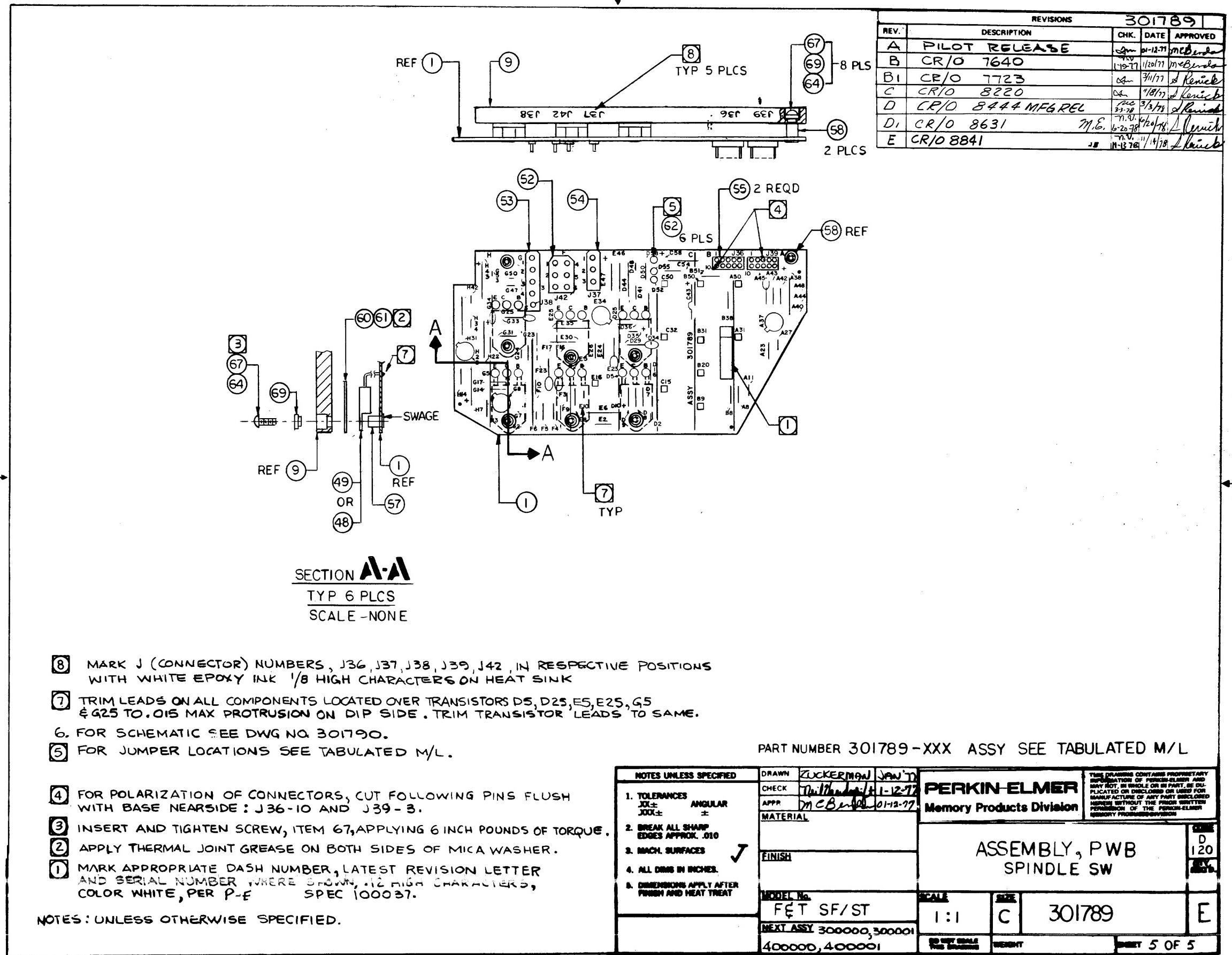
PERKIN-ELMER MATERIAL LIST					
Memory Products Division		PART NUMBER	REV.	CODE D120	
		301687-000	C		
ITEM NO.	DESCRIPTION	PART NO.	REQD	ACT. REV.	REMARKS
NEXT ASSEMBLY USED ON					
USE MATERIAL LIST AND ADD THE FOLLOWING:					
30	Capacitor, Tant. 6V 56uf	101001-566	1		F5
31					
32	Resistor, 5% 1W 1K	101156-102	1		E45.
33	Resistor, " 2.2K	-222	1		F43.
34	Resistor, 1% 3.48K	100155-341	1		B48.
35	Resistor, " 4.64K	-353	1		A6.
36	Resistor, 5% 10K	101156-103	8		C11,D26,48,E18,26,F10,33,50
37	Resistor, 1% 12.7K	100155-395	2		A42,E5
38	Resistor, 5% 15K	101156-153	1		F49
39	Resistor, " 20K	-203	1		D17.
40					
41					
42	Wire, Solid Insulated	100248-924	A/R		Jumper Across B18
43	Extractor, Card	107901-001	2		
44	Pin Wire Wrap	100360-001	7		A31,B25,B29,B95,E8,F8,F56
45					
46					
	Schematic	301688-001	0		
	Printed Master	301685-001	0		
	Specification	301439-001	0		
	Test Procedure	900110-001	0		
	Test Specification	900111-001	0		

FORM 209 (R.12/74)

PERKIN-ELMER MATERIAL LIST					
Memory Products Division		PART NUMBER	REV.	CODE D120	
		301687-001	E		
ITEM NO.	DESCRIPTION	PART NO.	REQD	ACT. REV.	REMARKS
NEXT ASSEMBLY USED ON					
USE MATERIAL LIST AND ADD THE FOLLOWING:					
50	I.C. 5020	101029-003	3		A13,A20,A21.
51					
52	Resistor, 5% 1W 7.5K	101156-752	6		B17,B26,B33,B34,C17,C26.
53	Resistor, 1% 49.9K	100155-452	1		A5.
54	Resistor, " 63.4K	-462	1		A17.
55	Resistor, " 100K	-481	1		B6.
56	Resistor, " 200K	-510	1		A26.
57	Resistor, " 402K	-539	1		A24.
58	Resistor, 5% 820K	101156-824	1		A32.
59	Resistor, " 1.6M	-165	1		A34.
60					
61	Capacitor, Poly. .01uf	101004-103	1		A18.
62					
63	Wire, Jumper	300648-001	1		Jumper A31 to B25.

PERKIN-ELMER MATERIAL LIST					
Memory Products Division		PART NUMBER	REV.	CODE D120	
		301687-002	F		
ITEM NO.	DESCRIPTION	PART NO.	REQD	ACT. REV.	REMARKS
NEXT ASSEMBLY USED ON					
USE MATERIAL LIST AND ADD THE FOLLOWING:					
50	I.C. 5020	101029-003	3		A13,A20,A21.
51					
52	Resistor, 5% 1W 7.5K	101156-752	6		B17,B26,B33,B34,C17,C26.
53	Resistor, 1% 49.9K	100155-452	1		A5.
54	Resistor, " 63.4K	-462	1		A17.
55	Resistor, " 100K	-481	1		B6.
56	Resistor, " 200K	-510	1		A26.
57	Resistor, " 402K	-539	1		A24.
58	Resistor, 5% 820K	101156-824	1		A32.
59	Resistor, " 1.6M	-165	1		A34.
60					
61	Capacitor, Poly. .01uf	101004-103	1		A18.
62					
63	Wire, Jumper	300648-001	1		Jumper A31 to B29.

FORM 209 (R.12/74)



PERKIN-ELMER		MATERIAL LIST			PART NUMBER	
Memory Products Division					REV.	
ASSY. PNB. TITLE SPINDLE SW.		MODEL	F&T SF & ST	DATE 12-13-76		SHEET 1 OF 5
ITEM NO.	DESCRIPTION	PART NO.	REQD REV.	ACT REV.	REMARKS	
					NEXT ASSEMBLY/USED ON	
					300000,300001,400000,400001	
1	Board, Processed	301780-001	1			
2						
3						
4						
5						
6						
7						
8						
9	Plate, Heatsink	301932-001	1			
10	IC 74LS123	123039-001	1		C50	
11	IC 74LS42	123037-001	1		B50	
12	IC 75451	101139-001	3		B9,20,31	
13	IC 74LS157	123040-001	1		A50	
14	IC 74LS74	123036-001	1		A31	
15	IC 7406	100331-001	1		C15	
16	IC NE555	101923-001	1		E16	
17	IC 74LS02	123030-001	1		C32	
18	Capacitor, Tant. .35V 1uF	101003-105	1		E47	
19	Capacitor, " .35V 6.8uF	101003-635	3		A38,H22,43	
20	Capacitor, " 20V 15uF	101002-156	2		E6,H7	
21	Capacitor, Cer. 50V .33uF	101086-334	6		D48,F6,9,G24,47,H42	
22	Capacitor, Cer. .47uF	101036-474	1		D10	
23	Capacitor, Cer. 100V .01uF	101042-103	7		A11,27,02,35,E10,G7,H34	
24	Capacitor, " 100V .01uF	102662-001	6		D16,36,F3,10,G50,H3	
25	Capacitor 6V .56uF	101001-566	3		C43,58,D34	
26						
27	Diode, Zener 4.7V IN5230B	101058-005	1		A45	
28						
29						
30	Resistor, 5 .W 510	101156-511	6		D41,E9,F5,G14,23,53	
31						
32	Resistor, 1 .W 225	100172-281	3		E30,46,F23	
33						

FORM 209 (R.12/74)

FORM 209 (R.12/74)

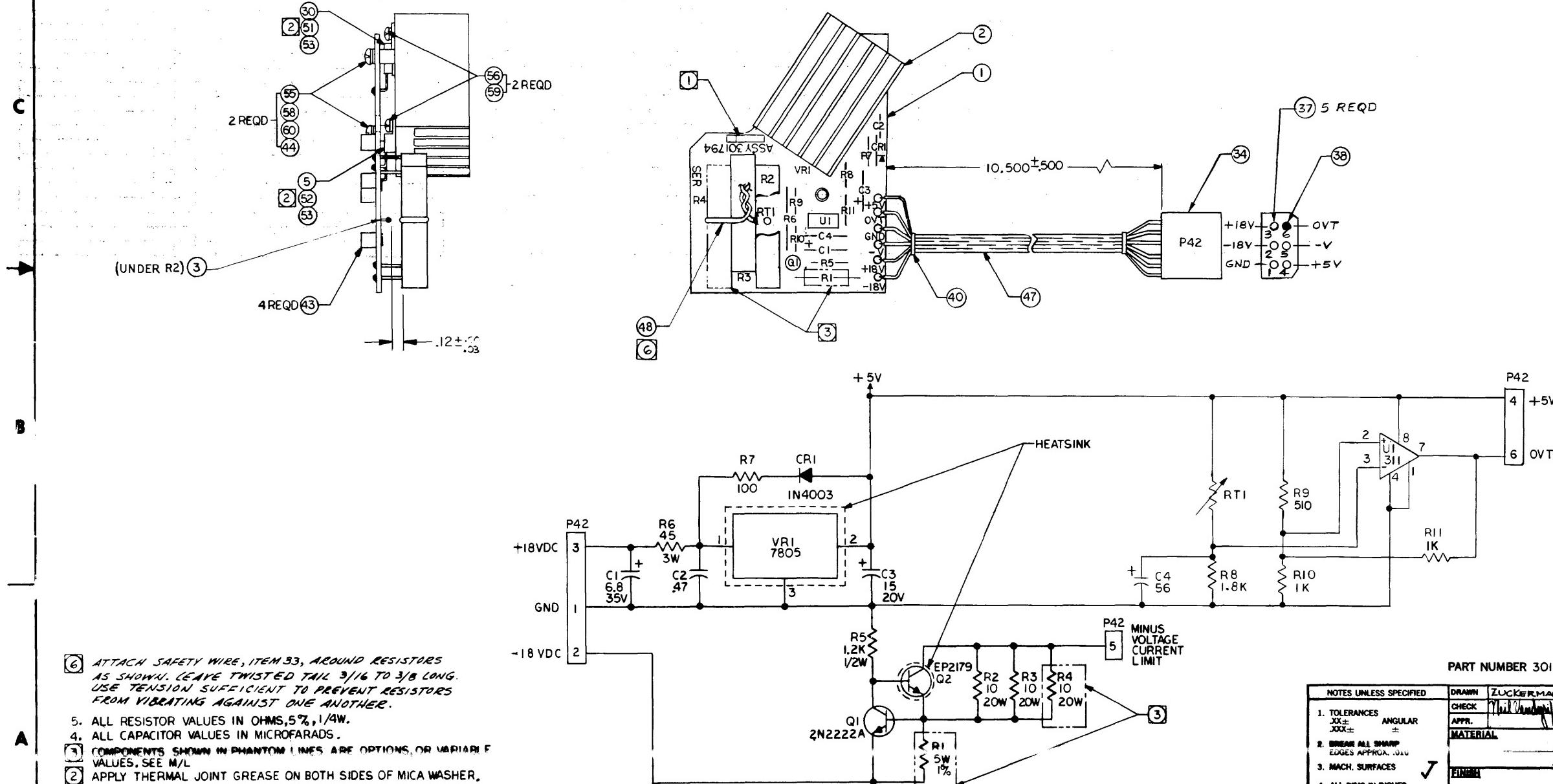
PERKIN-ELMER		MATERIAL LIST			PART NUMBER	REV.
Memory Products Division					301789-000	E
ASSY. PWB. TITLE		F&T MODEL	SF & ST	DATE 12-13-76, SHEET 2 OF 5		
PART NUMBER	ITEM NO.	DESCRIPTION	PART NO.	REQD	MIN. REV.	ACT. REV.
301789-000						REMARKS
						NEXT ASSEMBLY/USED ON
	34					
	35	Resistor, 3W±3%	1K	101084-046	3	E35,G2,H31
	36	Resistor, 5%, 1W	1K	101156-102	10	A8,23,88,51,38,D7,8,E24,G17
						H14
	37	Resistor, " "	2K	101156-202	3	E26,F4,G31
	38	Resistor, " "	3K	-302	1	A43
	39	Resistor, " "	5.1K	-512	1	A42
	40	Resistor, " "	10K	-103	1	D9
	41	Resistor, " "	150K	-154	2	C54,D50
	42					
	43	Resistor, 5%, 1W	1 meg	101156-105	1	E2
	44					
	45					
	46	Transistor	2N2222A	101052-001	1	A37
	47	Transistor	2N2907A	101053-001	3	E34,G8,H25
	48	Transistor,PWR	EP2179	151003-001	3	D5,E5,G5
	49	Transistor,PWR	EP2180	151004-001	3	D25,E25,G25
	50					
	51					
	52	Connector	6 Pin	100247-013	1	J42
	53	Connector	5 Pin	100247-007	1	J38
	54	Connector	3 Pin	-016	1	J37
	55	Connector	10 Pin	120905-001	2	J36,39
	56					
	57	Standoff-Swage Type		147800-002	6	.250 dia x .250 LG
	58	Standoff- " "		-004	2	.250 dia x .312 LG
	59					
	60	Insulator, Mica		100147-001	6	
	61	Grease, Thermal Joint		120100-001	A/R	
	62	Pin, Wire Wrap		100360-001	6	A40,44,48,D52,55,58
	63					
	64	Cement		100303-004	A/R	
	65					

FORM 209

FORM 209 (R.I.)

FORM 209 (F)

REVISIONS			
REV.	DESCRIPTION	CHK.	DATE APPROVED
X1	EXP REL		
X2	EXP REL		
A	P-207 25L		1-1-77
E	25L		
B1	CR/O 7852		
C	CR/O 8060		
D	CR/O 8460		4-1-77
E	25L		
F	CR/O 8055		



PART NUMBER 301794-XXX ASSY SEE TABULATED M/L

NOTES UNLESS SPECIFIED	DRAWN	ZUCKERMAN	OCT '76
1. TOLERANCES	CHECK	7/17/76	10/2/76
2. BREAK ALL SHARP EDGES APPROX. .010	APPR.		
3. MACH. SURFACES	MATERIAL		
4. ALL DIMS IN INCHES.	FINISH		
5. DIMENSIONS APPLY AFTER FINISH AND HEAT TREAT	MODEL No.		
	SCALE		
	SIZE		
	NEXT AMY		
	300000,300001		
	400000,400001		
	DO NOT SCALE THIS DRAWING		
	WEIGHT		
	SHEET		

PERKIN-ELMER
Memory Products Division

ASSEMBLY, PWB- SPINDLE DRIVE LIMITER & 5V DRIVE

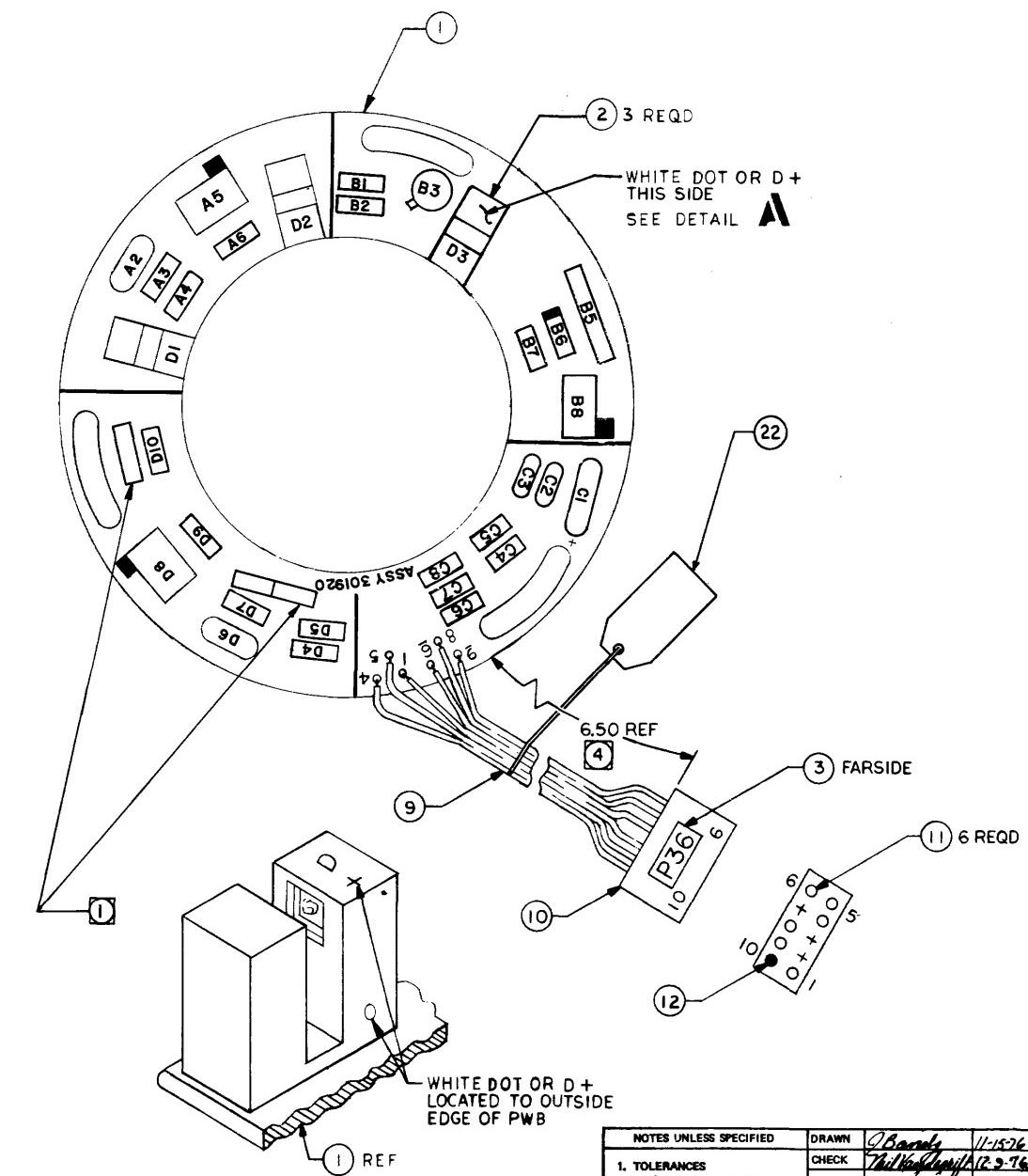
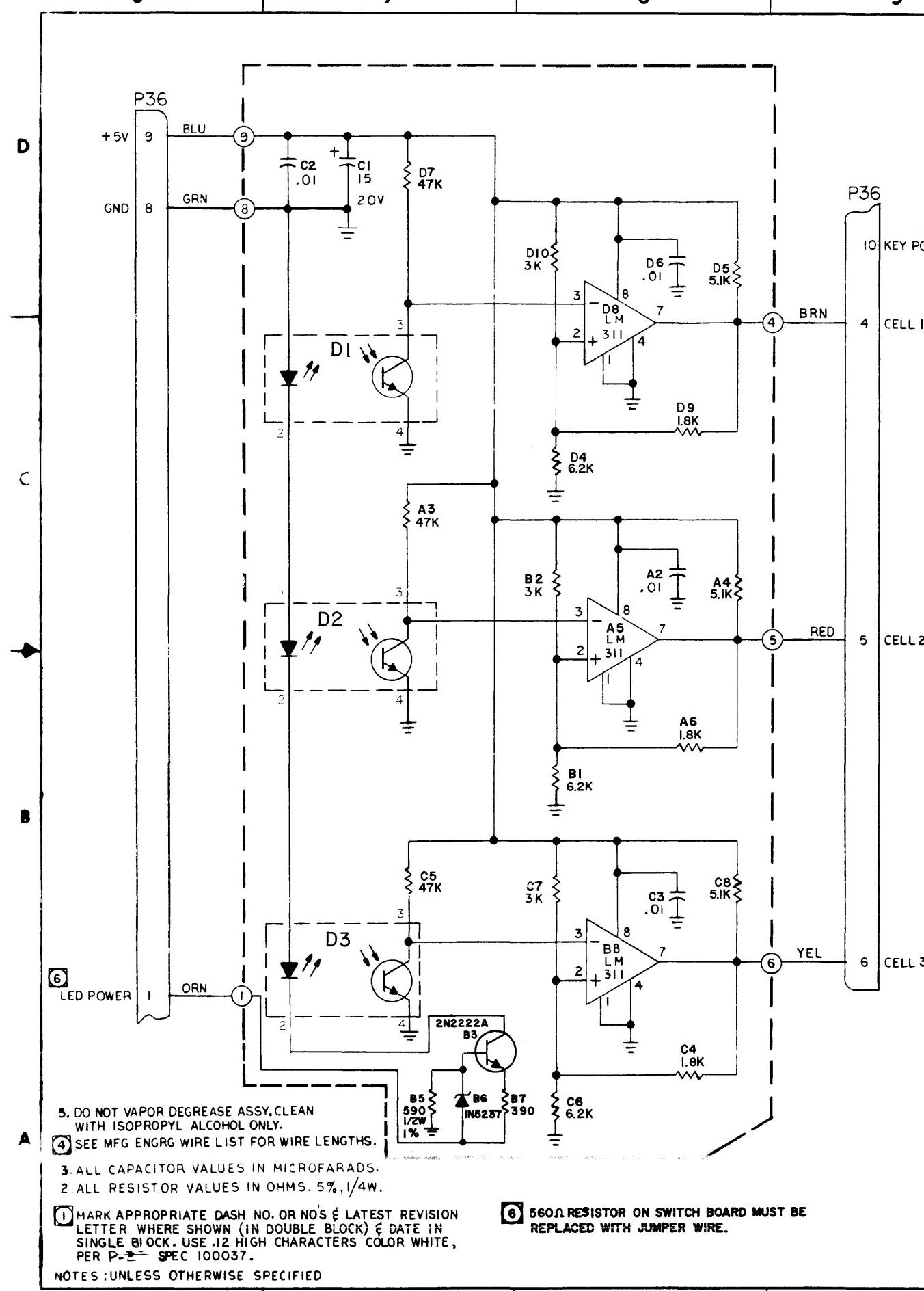
301794

300000,300001

400000,400001

3 OF 3

PERKIN-ELMER		MATERIAL LIST			PART NUMBER	REV.
Memory Products Division				F&T	301794-000	F
ASSY. PWB. SPINDLE DRIVE LIMITER & 5V DRIVE		MODEL SF, ST		DATE 12-13-76 SHEET 2 OF 3		
ITEM NO.	DESCRIPTION	PART NO.	REQD	ACT. REV.	REMARKS	
NEXT ASSEMBLY/USED ON						
34	Connector 6 Pin	100010-020	1		P42	
35						
36						
37	Pin, Female, Snap-Lock	100021-004	5			
38	Pin, Male, Snap-Lock	-010	1			
39						
40	Strap, Cable (TY-RAP)	100171-001	A/R			
41						
42						
43	Standoff, Swage, Threaded	101136-001	4			
44	" Hollow	147005-004	2			
45						
46						
47	Wire, Insulated, Stranded	100053-920	A/R			
48	" S.S. Safety Lock	164002-001	A/R			
49						
50						
51	Insulator, Transistor	100147-001	1		Use with Item 30	
52	Insulator, Transistor-Power	122700-001	1		" " " 5	
53	Silicone Grease	120100-001	A/R			
54						
55	Screw, Pan Head	100036-308	2		6-32 x 1/2 LG	
56	Screw, Pan Head	100036-204	2		4-40 x 1/4 LG	
57						
58	Washer, Split Lock	100042-300	2		No. 6.	
59	" Shoulder, Nylon	100063-014	2		No. 4.	
60	" Flat-Reduced O. D.	100251-300	2		No. 6.	
61						
62						
Printed Master	301792	Ref	C			
Schematic	301794	Ref	C		(Appears on Assy. Dwg.)	
Specification		Ref				
Test Procedure		Ref				



PART NO. 301920-001 ASSY

NOTES UNLESS SPECIFIED		DRAWN <i>Barry</i> 11-15-76	PERKIN-ELMER Memory Products Division		
1. TOLERANCES		CHECK <i>Thompson</i> 12-9-76	THIS DRAWING CONTAINS PROPRIETARY INFORMATION OWNED BY PERKIN-ELMER AND MAY NOT, IN WHOLE OR IN PART, BE DUPLICATED, REPRODUCED, OR DISCLOSED TO THE MANUFACTURE OF ANY PART DISCLOSED HEREIN WITHOUT THE PRIOR WRITTEN CONSENT OF THE PERKIN-ELMER MEMORY PRODUCTS DIVISION.		
JOGS — ANGULAR JOCKEY ± —		APPR. <i>SCV</i> 12-10-76			
2. BREAK ALL SHARP EDGES APPROX. .010		MATERIAL			
3. MACH. SURFACES — ✓		ASSEMBLY, PWB, COMMUTATOR BOARD			CODE <i>D</i> 120
4. ALL DIMS IN INCHES.					QTY. RECD.
					1
MODEL NO.		SCALE	SIZE		
<i>SFF ST</i>		2 : 1	<i>D</i>	301920	
NEXT ASSY		DO NOT SCALE THIS DRAWING		WEIGHT	SHEET 2 OF 2
301690 301217					

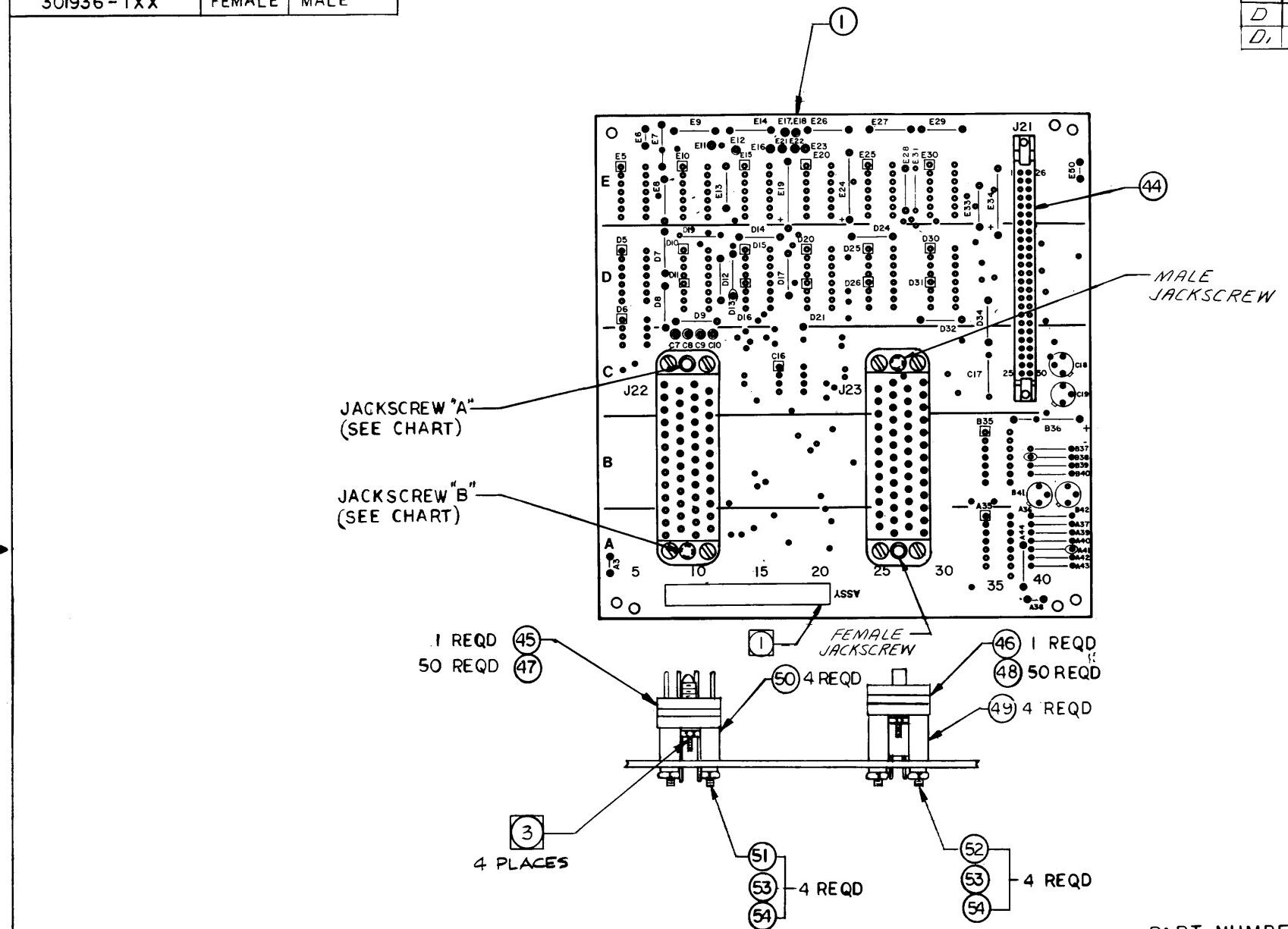
REV.	PART NUMBER	MATERIAL LIST				CODE 0120	
		PART NUMBER	REV.	ITEM NO.	DESCRIPTION		
	301920-001	301920-001	C				
		TITLE ASSY., COMMUTATOR PWB.		F&T	DATE 12-9-76	SHEET 1 OF 2	
		MODEL SF & ST					
APPROVED	DATE	ITEM NO.	DESCRIPTION	PART NO.	REOD REV.	ACT REV.	REMARKS
							NEXT ASSEMBLY USED ON
							301690, 301217
1	Board, Processed	301919-001	1	D			
2	Switch, Optical Modified	301272-001	3		D1,D2,D3		
3	Marker, Conn. - P	202340-036	1		P36		
4	I.C.	LM311	101022-001	3	A5,B8,D8		
5	Transistor	2N222A	101052-001	1	B3		
6	Diode	IN5237	101058-012	1	B6		
7	Capacitor, Disc, 100V .01	102662-001	4		A2,C2,C3,D6		
8	Capacitor, Tant. 20V 15 uf	101002-156	1		C1		
9	Cable, Flat 6 Cond.	100403-001	A/R				
10	Connector, Hsg.	105016-001	1		P36		
11	Pin, Female	106004-001	6				
12	Key, Polarization	101171-001	1				
13							
14	Resistor, 5%, 1W 1.8K	101156-182	3		A6,C4, D2		
15	Resistor, " " 3K	-302	3		B2,C7, D10		
16	Resistor, " " 5.1K	-512	3		A4,C8,D5		
17	Resistor, " " 6.2K	-622	3		B1,C6, D4		
18	Resistor, " " 47K	-473	3		A3,C5, D7		
19	Resistor, 1%, 1W 590	100172-267	1		B5		
20	Resistor, 5%, 1W 390	101156-391	1		B7		
21							
22	Tag, Field Notice	302080-001	1				
23							
24	Printed Master	301918-001	O				
25	Schematic	301920-C(1)	O		(Appears on Assy.)		
26							
27	Specification	301921-001	O				
28							
29							
30							

FORM 200 (R.12774)

EC

TABULATION CHART		
PART NO.	JACKSCREW	
	"A"	"B"
301936 - OXX	MALE	FEMALE
301936 - IXX	FEMALE	MALE

REV. 301936			
REV.	DESCRIPTION	CHK.	DATE APPROVED
A	PILOT REL	CR	01-10-77 1/18/80
A ₁	CR/O 7721	CR	3/6/81 J. Ranick
B	CR/O 7768	CR	3/24/81 H.R.
C	MFG. REL. CR/O 7902	CR	7-13-77 J. Ranick
D	CR/O 8427	CR	3/3/81 J. Ranick
D ₁	CR/O 8545	CR	3/6/81 J. Ranick



- ③ APPLY LOCTITE (ITEM 55) TO INTERNAL THREADS OF NUT OF JACKSCREW.
2. FOR SCHEMATIC REF, SEE 301937.
① MARK APPROPRIATE DASH NO., LATEST REVISION LETTER AND S/N, .12 HIGH WHITE CHARACTERS PER P-E SPEC 100037.
NOTES: UNLESS OTHERWISE SPECIFIED

NOTES UNLESS SPECIFIED	DRAWN ZUCKERMAN JAN 77
1 TOLERANCES XX ANGULAR XXX	CHECK T. Nakagawa Jan 77
2 BREAK ALL SHARP EDGES APPROX 010	APPR. MeB 01-10-77
3 MACH SURFACES	MATERIAL
4 ALL DIMS IN INCHES	FINISH
5 DIMENSIONS APPLY AFTER FINISH AND HEAT TREAT	MODEL No. SF ST
	SCALE 1:1
	SIZE C
	DATE 301936
	REVISIONS
	4 OF 4

THIS DRAWING CONTAINS PROPRIETARY INFORMATION OF PERKIN-ELMER CORPORATION AND MAY NOT BE COPIED OR USED FOR MANUFACTURE OF ANY PART DISCLOSED EXCEPT UNDER METHODS OF THE WRITTEN PERMISSION OF THE PERKIN-ELMER MEMORY PRODUCTS DIVISION

PERKIN-ELMER
Memory Products Division

ASSEMBLY
I/O CONNECTOR
D 40

D 120

42

REV.	DATE	APPROVED	MATERIAL LIST							
			PART NUMBER	REV.	PART NUMBER	REV.	PART NUMBER	REV.	PART NUMBER	REV.
			PERKIN-ELMER Memory Products Division							
			ASSY. PWB I/O D40							
			MODEL SF & ST DATE 11-17-76 SHEET 1 OF 4							
			ITEM NO. DESCRIPTION PART NO. REQD MIN. REV. ACT. REV. REMARKS							
			NEXT ASSEMBLY/USED ON							
1	Board, Processed	301935-001	1	Z						
2										
3	I.C.	7402	100329-001	1	E10					
4	I.C.	7404	100330-001	1	E15					
5	I.C.	7403	101007-001	1	E5					
6	I.C.	75452	101031-001	12	C16,06,10,11,15,16,20,21,25 D26,30,31					
7	I.C.	7414	123001-001	1	D5					
8	I.C.	8T320 or 8836	100347-001	5	A35,B35,E20,25,30					
9										
10										
11										
12	Capacitor,Cer.20%,100V,.01uf	102662-001	11	A44,D9,14,24,32,E7,9,14,26, E27,29						
13										
14										
15	Capacitor,Cer.20%,50V,.1uf	101087-104	4	A3,38,E6,50						
16										
17	Capacitor,Tant,6V,56uf	101001-566	4	B36,E19,24,34						
18										
19										
20	Diode, Rectifier	1N4003	100127-001	1	D13					
21	Diode, Zener 3.9V	1N5228B	101058-003	1	A41					
22	Diode	1N5317	101034-001	1	B38					
23										
24										
25	Resistor, 5%, $\frac{1}{2}$ W	56	101156-560	1	A40					
26	" "	75	-750	1	E33					
27	" "	100	-101	5	A36,37,B39,40,C17					
28	" "	160	-161	1	A42					
29	" "	200	-201	1	A43					
30	" "	390	-391	1	A39					
31	Resistor, 5%, $\frac{1}{2}$ W	510	101156-511	1	D17					

FORM 209 (R.12/74)

REV.	DATE	APPROVED	MATERIAL LIST							
			PART NUMBER	REV.	PART NUMBER	REV.	PART NUMBER	REV.	PART NUMBER	REV.
			PERKIN-ELMER Memory Products Division							
			ASSY. PWB I/O D40							
			MODEL SF & ST DATE 11-17-76 SHEET 2 OF 4							
			ITEM NO. DESCRIPTION PART NO. REQD MIN. REV. ACT. REV. REMARKS							
			NEXT ASSEMBLY/USED ON							
32	Resistor, 5%, $\frac{1}{2}$ W	1K	101156-102	2	E13,28					
33	" "	2K	-202	2	D34,E8					
34	" "	10K	-103	3	D7,8,12					
35	Resistor, 5%, $\frac{1}{2}$ W	150K	101156-154	1	B37					
36	Resistor, " "	270	101156-271	2	D19,E31					
37	Pin, Wire Wrap		100360-003	12	C7,8,9,10,E11,12,16,17,18, E21,22,23					
38										
39										
40										
41	Transistor	2N222A	101052-001	4	B41,42,C18,19					
42										
43										
44	Connector, Male	50 Pin	101040-001	1	J21					
45	" "	" "	105010-003	1	J22					
46	" Female	" "	-004	1	J23					
47	Contact, Pin - Male		106002-002	50						
48	" " Female		-001	50						
49	Spacer, Fibre		100391-014	4						
50	Spacer, "		-002	4						
51	Screw, Fillister Head		145003-212	4	4-40 x 3/4					
52	Screw, " "		-214	4	4-40 x 7/8					
53	Washer, LK, Int. Tooth		100059-200	8	No. 4					
54	Nut, Hex		100043-200	8	No. 4					
55	Cement, Loctite		100303-004	A/R						
	Printed Master		301934-001	0						
	Schematic		301937-001	0						
	Test Spec.		301938-001	0						
	Rework Instructions		302116-001	0						

FORM 209 (R.12/74)

REV.	DATE	APPROVED	MATERIAL LIST							
			PART NUMBER	REV.	PART NUMBER	REV.	PART NUMBER	REV.	PART NUMBER	REV.
			PERKIN-ELMER Memory Products Division							
			ASSY. PWB I/O D40							
			MODEL SF & ST DATE 12/21/76 SHEET 1 OF 2							
			ITEM NO. DESCRIPTION PART NO. REQD MIN. REV. ACT. REV. REMARKS							
			NEXT ASSEMBLY/USED ON							
50	Jumper, Insulated		300648-001	3	Jumper J1 E23 to E22 J2 E17 to E 21 J3 E11 to E 12 J4 C9 to C10					
51										
52										
53										
54										
55										

FORM 209 (R.12/74)

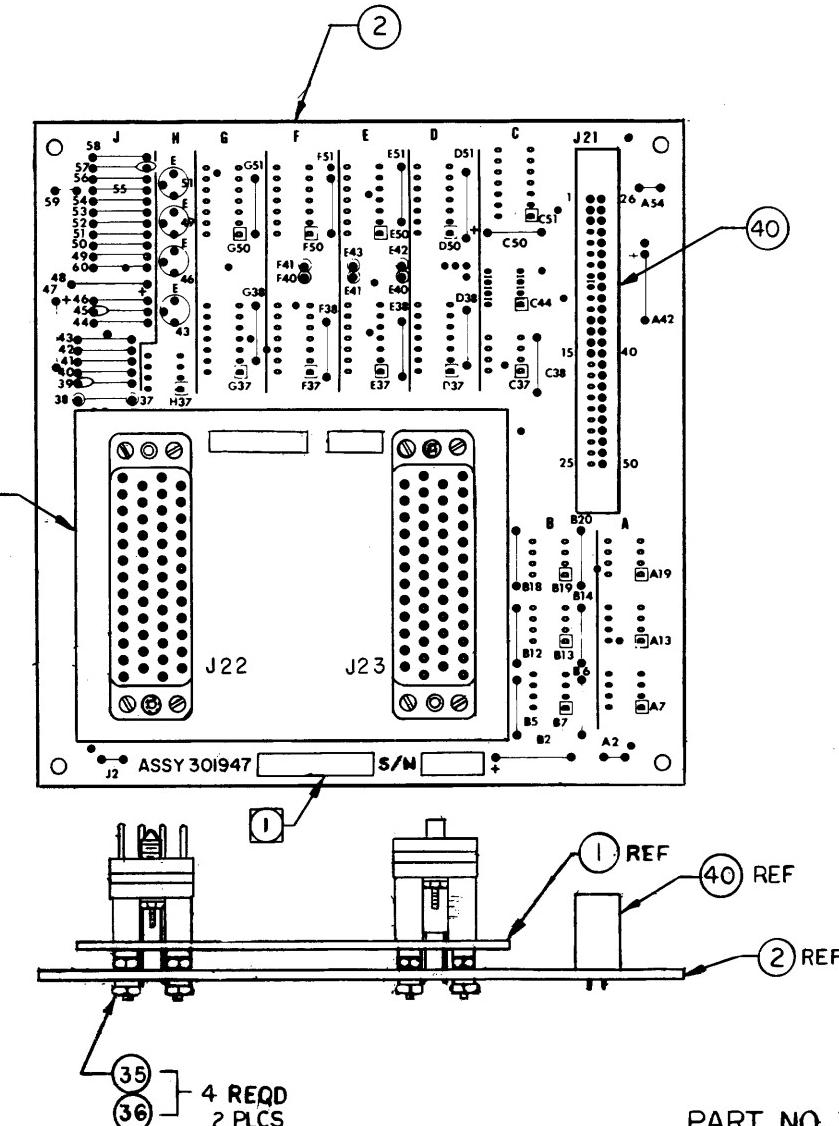
REV.	DATE	APPROVED	MATERIAL LIST							
			PART NUMBER	REV.	PART NUMBER	REV.	PART NUMBER	REV.	PART NUMBER	REV.
			PERKIN-ELMER Memory Products Division							
			ASSY.,PWB, I/O - D40							
			MODEL SF & ST DATE 12/21/76 SHEET 1 OF 2							
			ITEM NO. DESCRIPTION PART NO. REQD MIN. REV. ACT. REV. REMARKS							
			NEXT ASSEMBLY/USED ON							
50	Jumper, Insulated		300648-001	4	Jumper J1 E23 to C8 J2 E17 to E21 J3 E11 to E12 J4 C9 to C10					
51										
52										
53										
54										
55										

FORM 209 (R.12/74)

HEAD SELECT INVERTED
CARTRIDGE ONLY
LINE RECEIVERS GATED WITH WRITE CHECK

CODE
D120

REVISIONS			
REV.	DESCRIPTION	CHK.	DATE APPROVED
A	PILOT REL	A	1-4-77 B.Muller
A	MFG REL NO CHG	A	1/20/77 A.Kenick
A1	CR10 9015/A	A	4-20-79 79 B.Muller



THE DRAWING CONTAINS PROPRIETARY INFORMATION OF PERKIN-ELMER AND
MAY NOT, IN WHOLE OR IN PART, BE COPIED OR USED FOR THE
MANUFACTURE OF ANY PART DISCLOSED
HEREIN WITHOUT THE WRITTEN CONSENT
OF THE PERKIN-ELMER
MEMORY PRODUCTS DIVISION.

PART NO. 301947-001 ASSY DW 2/20/77

PERKIN-ELMER
Memory Products Division

ASSEMBLY, PWB
I/O CONNECTOR
W/INTERRUPT OPTION

NOTES UNLESS SPECIFIED	DRAWN	ZUCKERMAN	DEC '76
1 TOLERANCES .XX .ANGULAR .XXX .	CHECK	Thel [initial]	1-3-77
2. BREAK ALL SHARP EDGES APPROX .010	APPR.	R. [initial]	1-4-77
3 MACH. SURFACES	MATERIAL	[Blank]	
4 ALL DIMS IN INCHES	FINISH	[Blank]	
5 DIMENSIONS APPLY FILE K FINISH AND HAT TREAT	MODEL NO.	FET	301947
	SCALE	1:1	C
	SIZE	4 OF 4	
	NEXT ASSY	cc	

2. FOR SCHEMATIC REFS, SEE 301953, 301948.
 MARK APPROPRIATE DASH NO., REVISION LETTER &
 S/N WHERE SHOWN, 12 HIGH CHARACTERS,
 COLOR WHITE PER P-E SPEC 100037.

NOTES: UNLESS OTHERWISE SPECIFIED

REV.	PART NUMBER	DATE	MATERIAL LIST					
			PART NUMBER	REV.	ITEM NO.	DESCRIPTION	PART NO.	REQD
A	PERKIN-ELMER Memory Products Division		ASSY., I/O CONNECTOR W/INTERRUPT OPTION	301947-000	A			
	TITLE		MODEL	F/T	DATE	11-16-76	SHEET	1 OF 4
	ITEM NO.	DESCRIPTION	PART NO.	REQD	MIN. REV.	ACT. REV.	REMARKS	
							NEXT ASSEMBLY/USED ON	
1	Piggy Back I/O Connector -Assy	301952-001	1	A				
2	Board, Process	301946-001	1	A				
3								
4	I.C.	75452	101031-001	9	A7,13,19,B7,13,19,C37,44,H37			
5	I.C.	7402	100329-001	1	D37			
6	I.C.	7408	100332-001	1	D50			
7	I.C.	7414	123001-001	1	G37			
8	I.C.	8T380 or DM8836	100347-001	5	E37,50,F37,50,G50			
9								
10								
11	Transistor	2N222A	101052-001	4	H43,46,49,51			
12								
13								
14	Diode, Rect.	1N4003	100127-001	1	J39			
15	Diode,	1N5317	101034-001	1	J45			
16	Diode, Zener 3.9V	1N5228B	101058-003	1	J57			
17								
18								
19	Capacitor, Cer. 100V	.01 uf	102662-001	14	B5,6,12,14,18,20,C38,D38, E38,51,G38,51,F38,51			
20								
21	Capacitor, Cer. 50V	.1uf	101087-104	4	A2,54,J2,59			
22	Capacitor, Tant. 35V	6.8uf	101003-685	3	A42,D51,J47			
23	Capacitor, Tant. 6V	56uf	101001-566	2	B2,J48			
24								
25								
26	Resistor, 5%W	56	101156-560	1	J56			
27	" " "	75	-750	1	C50			
28	" " "	100	-101	6	J46,49,50,51,55,60			
29	" " "	110	-111	4	J40,41,42,43			
30	" " "	160	-161	1	J53			
31	" " "	200	-201	1	J52			

FORM 209 (R.12/74)

C-3-

REV.	PART NUMBER	DATE	MATERIAL LIST					
			PART NUMBER	REV.	ITEM NO.	DESCRIPTION	PART NO.	REQD
A	PERKIN-ELMER Memory Products Division		ASSY., I/O CONNECTOR W/INTERRUPT OPTION	301947-000	A			
	TITLE		MODEL	F/T	DATE	11-16-76	SHEET	2 OF 4
	ITEM NO.	DESCRIPTION	PART NO.	REQD	MIN. REV.	ACT. REV.	REMARKS	
							NEXT ASSEMBLY/USED ON	
32	Resistor, 5%W	390	101156-391	1	J54			
33	" " "	510	-511	1	J58			
34	" " "	150K	-154	1	J44			
35	Washer,Lk. Int. Tooth	100059-200	8					
36	Nut, Hex.	100043-200	8					
37								
38	Pin,Wire Wrap .025 Sq.	100360-001	8	E40,41,42,43,F40,41, J37,38				
39	Jumper, Insulated	300648-001	1	Jumper J37 to J38				
40	Connector, Male 50 Pin	101040-001	1	J21				
	Printed Master	301945-001	Ref A					
	Schematic	301948-001	Ref A					
	Specification	301949-001	Ref					

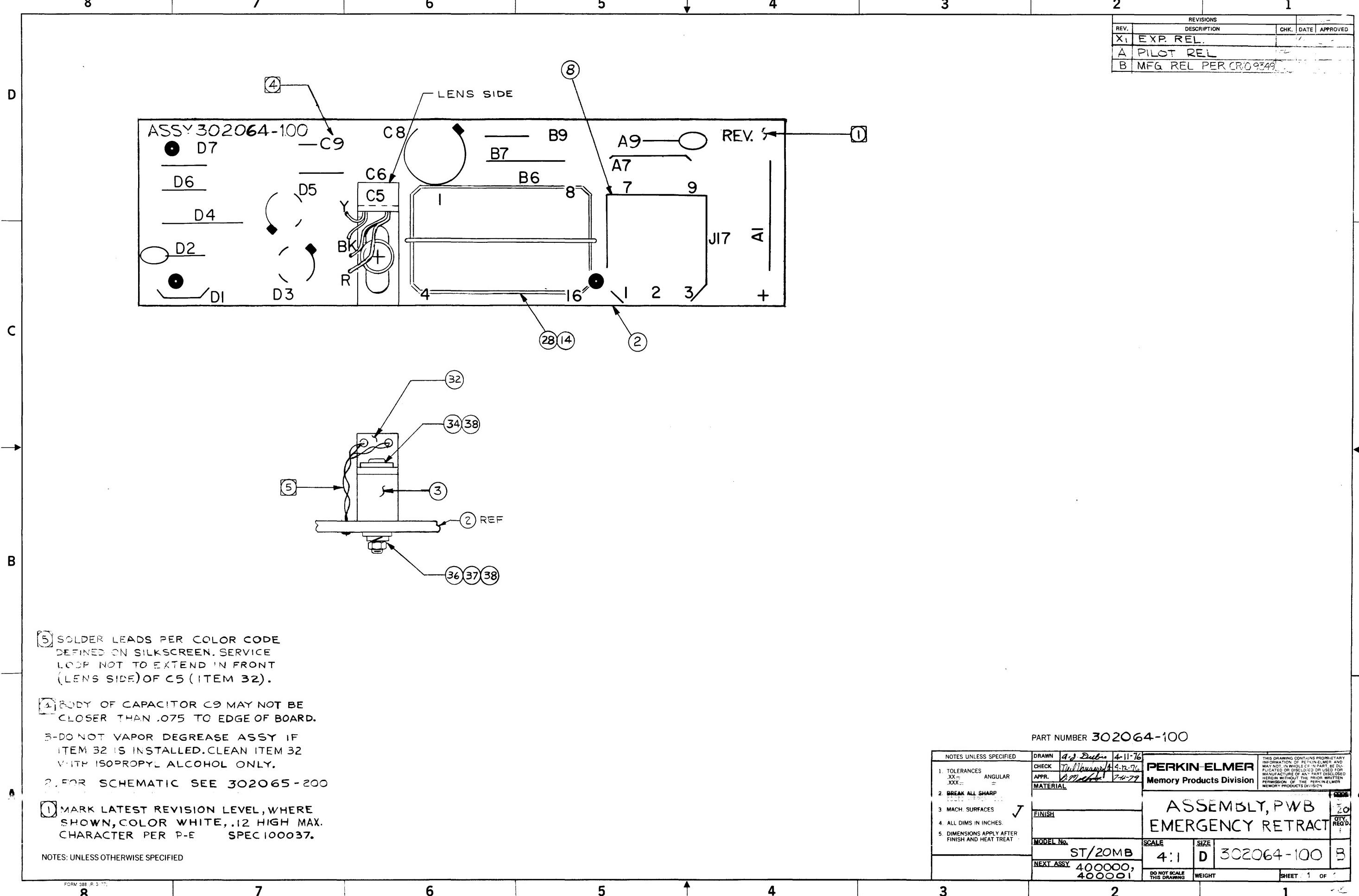
FORM 209 (R.12/74)

REV.	PART NUMBER	DATE	MATERIAL LIST					
			PART NUMBER	REV.	ITEM NO.	DESCRIPTION	PART NO.	REQD
A	PERKIN-ELMER Memory Products Division		ASSY., I/O CONNECTOR W/INTERRUPT OPTION	301947-001	A			
	TITLE		MODEL	F&T	DATE	12-8-76	SHEET	1 OF 1
	ITEM NO.	DESCRIPTION	PART NO.	REQD	MIN. REV.	ACT. REV.	REMARKS	
							NEXT ASSEMBLY/USED ON	
	USE MATERIAL LIST AND ADD THE FOLLOWING:	301947-000	A					
39	Jumper, Insulated	300648-001	2	Jumper E42 to E41 F41 to E43				

FORM 209 (R.12/74)

REV.	PART NUMBER	DATE	MATERIAL LIST					
			PART NUMBER	REV.	ITEM NO.	DESCRIPTION	PART NO.	REQD
A	PERKIN-ELMER Memory Products Division		ASSY., I/O CONNECTOR W/INTERRUPT OPTION	301947-002	A			
	TITLE		MODEL	SF & ST	DATE	12-8-76	SHEET	1 OF 1
	ITEM NO.	DESCRIPTION	PART NO.	REQD	MIN. REV.	ACT. REV.	REMARKS	
							NEXT ASSEMBLY/USED ON	
	USE MATERIAL LIST AND ADD THE FOLLOWING:	301947-000	A					
39	Jumper, Insulated	300648-001	2	Jumper E40 to E41 F40 to E43				

FORM 209 (R.12/74)



REV.	B	MATERIAL LIST			CODE D120
		PERKIN-ELMER Memory Products Division	ASSEMBLY PART NUMBER 302064-001	REV. B	
ASSY. PMB. EMERGENCY RETRACT			ST 20MB	DATE 4/11/77	SHEET 1 OF 3
ITEM	REQD	PART NO.	DESCRIPTION	REMARKS	
1					
2	1	302063-001	Processed Board		
3	1	302067-001	Support, Transducer		
4					
5	1	100243-511	Capacitor, Mica 510pf	C9	
6	1	101003-685	Capacitor, Tant 35V, 10% 6.8uf	A1	
7					
8	1	100247-004	Conn, Header	J17	
9					
10					
11	1	100127-001	Diode, Rectifier 1N4003	A9	
12	1	101058-003	Diode, Zener 3.9V 1N5228B	D2	
13					
14	1	100240-001	Relay, 4PDT, 12VDC.	B6	
15					
16	1	100068-470	Resistor, 5%, 3W. 47	A7	
17	1	-101	Resistor, " " 100	B7	
18	1	100068-221	Resistor, " " 220	D4	
19					
20					
21	1	101156-151	Resistor, Carbon 5%, 1W. 150	D1	
22	1	-511	Resistor, " " " 510	C6	
23	1	-472	Resistor, " " " 4.7K	D7	
24	1	-103	Resistor, " " " 10K	B9	
25	1	101156-302	Resistor, " " " 3K	D6	
26					
27	1	100223-001	Insulator, Transistor, TO-5	For C8	
28	1	100241-001	Socket-Relay, 4 Pole	SOCKET - B6	
29					
30	1	100162-001	Thyristor, SCR	C8	
31					
32	1	160001-001	Transducer, Reflective	C5	
33	2	101053-001	Transistor, PNP 2N2907A	D3,5	

FORM 208 (R 3/77)

REV.	B	MATERIAL LIST			CODE D125
		PERKIN-ELMER Memory Products Division	ASSEMBLY PART NUMBER 302064-001	REV. B	
ASSY. PMB. EMERGENCY RETRACT			ST 20MB	DATE 4/11/77	SHEET 2 OF 3
ITEM	REQD	PART NO.	DESCRIPTION	REMARKS	
34	1	100036-210	Screw, P.H.	4-40 X 5/8	
35					
36	1	100042-200	Washer, Split Lock	No. 4	
37	1	100043-200	Nut, Hex	No. 4	
38	2	100251-200	Washer flat, reduce O.D.	No. 4	
39					
40	0	302062-001	Printed Master		
41	0	302065-200	Schematic		
42	0	302066-001	Specification		
43	0	302064-100	Assy. PMB Emergency Retract (DWG)		

FORM 209 (R 3/77)

SECTION 3

MASTER SPARE PARTS LIST

3.1 RECOMMENDATIONS

The recommended spare parts for the Perkin-Elmer SF and ST Disk Drives are listed in the following Master Spare Parts list.

3.2 COMPONENT VARIANCE

For resistors, capacitors, small hardware, and other items not included in the list, equivalents in type, value, size, tolerance, and quality may be substituted.

3.3 INTEGRATED CIRCUITS

For integrated circuits where the manufacturer is not specifically listed, any manufacturer's device of the specific type may be used.

MASTER SPARES LIST						
PERKIN-ELMER Memory Products Division				MATERIAL LIST		
				PART NUMBER	REV.	
TITLE <u>SUPER SERIES</u>		MODEL	SF & ST	DATE	SHEET <u>3</u> OF <u>1</u>	
ITEM NO.	DESCRIPTION	PART NO.	REQD	MIN. REV.	ACT. REV.	REMARKS
						NEXT ASSEMBLY/USED ON
PRINTED WIRING BOARDS:						
1	Assy. DIB (MFM) PWB	301422-001	1			2400RPM, 4400 BPI
	Assy. DIB (VFO) PWB	301320-001	1			1500RPM, Write Dbl. Freq.
						Read Pulse "D".
			-002	1		1500RPM, Wrt. Dbl. Freq., Rd.NRZ
			-004	1		1500RPM, Wrt. NRZI, Rd. NRZI
			-005	1		1500RPM, Wrt. NRZI, 1588.5,
						Read NRZI
			-007	1		2400RPM, Wrt. NRZI, Rd. NRZI
			-009	1		2400RPM, Wrt. Dbl. Freq., Read
						NRZI
			-010	1		2400RPM, Write Dbl. Freq.,
						Read Pulse "D"
2	Assy. Control Interface PWB	301174-001	1			D-30 Sector Counter, Multiplexed
						III Add-Pulse.
			-002	1		D-40 Sector Counter, Multiplexed,
	NOTE: -1XX Series has Temperature					III. Add-Pulse
	Control Write Lockout for use on					
	200 TPI.	-003	1			C-300/200 Sector Counter, Mult.
		-004	1			P3000 Sector Ctr., Multiplexed
		-005	1			D-30 No Sector Ctr.-Ind. Lines
		-006	1			C-300/200 No Sector Counter
						Ind. Lines
			-007	1		D-40 No Sector Counter-Ind. Lines
						III. Add-Level
			-008	1		GA-Caelus Sector Counter Mult.
			-009	1		D40 Sector Counter Multiplexed
						III. Add-Pulse

MASTER SPARES LIST					
MATERIAL LIST				PART NUMBER	REV.
TITLE	SUPER SERIES	MODEL	SF & ST	DATE	SHEET 4 OF _____
ITEM NO.	DESCRIPTION	PART NO.	REQD	MIN. REV.	ACT. REV.
					NEXT ASSEMBLY/USED ON
	PRINTED WIRING BOARDS:				
3	Assy. Servo Logic PWB	301687-001	1		200 TPI, 406 Tracks
		-002	1		200 TPI, 408 Tracks
		-003	1		100 TPI, 203 Tracks
		-004	1		100 TPI, 204 Tracks
4	Assy. Data Electronics PWB	301206-001	1		2200BPI, 1500RPM, 200 TPI
		-004	1		4400BPI, 2400RPM, 200 TPI
		-005	1		2200BPI, 1500RPM, 100 TPI
		-006	1		2200BPI, 2400RPM, 100TPI
		-008	1		2200BPI, 2400RPM, 200 TPI
5	Assy. Servo Amplifier PWB	301483-001	1		100 TPI
		-002	1		200 TPI with Track Offset
		-003	1		200 TPI No Track Offset
6	Assy. Disc Control PWB (con't)	301632-001	1		Front 1500RPM, 5us Index
		-002	1		Front 2400RPM, 5us index
		-003	1		Top 2400RPM 5us Index
		-004	1		Front 1500RPM, 500ns Index
		-005	1		Front 2400RPM 500ns Index
		-006	1		Top 2400RPM, 500ns Index
		-007	1		Front 1500RPM, 10us index
		-008	1		Front 2400RPM, 10us Index
		-009	1		Top 2400RPM. 10us Index
		-010	1		Front 1500RPM, 40us Index
		-011	1		Front, 2400RPM, 40us index
		-012	1		Top 2400RPM, 40us Index
		-013	1		Top 1500RPM, 5us Index with
					48 or 50 Sector Cartridge

MASTER SPARES LIST						
MATERIAL LIST			PART NUMBER		REV.	
PERKIN ELMER Memory Products Division						
TITLE	SUPER SERIES	MODEL	SF & ST	DATE	7	OF
ITEM NO.	DESCRIPTION	PART NO.	REOD	MIN. REV.	ACT. REV.	REMARKS
						NEXT ASSEMBLY/USED ON
	ELECTRONIC COMPONENTS (cont.)					
1	IC, Dual Monostable	9602	100234	1		Used on 301320
2	IC, Quad 2 Input NOR	7402	100329	1		" " 301062
						" " 301453
3	IC, Hex Inverter	7404	100330	1		" " 301483
						" " 301453
4	IC, Hex Inverter	7406	100331	1		" " 301653
						" " 301206
5	IC, Quad 2 Input AND	7408	100332	2		" " 301062
6	IC, Quad 2 Input NOR	SP380	100347	5		" " 301062
7	IC, Quad 2 Input NAND	7403	101007	1		" " 301453
8	IC, Quad 2-Input NAND	7426	101011	2		" " 301483
9	IC, Voltage Comp.	311	101022	5		" " 301483
						" " 301206
						" " 301632
						" " 301170
10	IC, Timer	555V	101023	1		" " 301653
						" " 301174
11	IC, Bi. Direct One Shot	8T20B	101024	1		301320
12	IC, Dual Op.-Amp.	5558	101026	12		" " 301483
						" " 301687
						" " 301632
13	IC, Analog Sw.	1H5020	101029-003	4		" " 301483
						" " 301687
14	IC, Dual NAND Driver	75452	101031	1		" " 301483
						" " 301206
						" " 301062
						" " 301453
15	IC, Video Amp.	592	101032	2		" " 301206
16	IC, D/A Converter	1406	101088	1		" " 301687
17	IC, Dual AND Driver	75451	101139	3		" " 301653
18	IC, Hex Inverter	7414	123001	1		" " 301453
19	IC, Dual D Flip-Flop	74S74	123023	1		" " 301206

MASTER SPARES LIST						
MATERIAL LIST			PART NUMBER		REV.	
PERKIN ELMER Memory Products Division						
TITLE	SUPER SERIES	MODEL	SF & ST	DATE	7	OF
ITEM NO.	DESCRIPTION	PART NO.	REOD	MIN. REV.	ACT. REV.	REMARKS
						NEXT ASSEMBLY/USED ON
	ELECTRONIC COMPONENTS (cont.)					
19	IC, Dual D Flip-Flop	74S74	123023	1		Used on 301320
20	IC, Quad 2-Input NAND	74LS00	123029	1		" " 301632
						" " 301687
						" " 301320
						" " 301174
21	IC, Quad 2-Input AND	74LS08	123032	4		" " 301687
						" " 301320
						" " 301174
22	IC, Triple 3-Input AND	74LS11	123034	3		" " 301687
						" " 301320
						" " 301632
23	IC, Quad 2-Input OR	74LS32	123035	2		" " 301687
						" " 301174
						" " 301320
24	IC, Quad D Flip-Flop	74LS74	123036	3		" " 301174
						" " 301320
						" " 301632
						" " 301653
25	IC, 4-Line to 10-Line Decoder		123037	1		" " 301653
26	IC, Quad 2-Input Mux.	74LS157	123040	2		" " 301653
						" " 301174
27	IC, Hex Inverter	74S04	123046	1		" " 301206
						" " 301320
28	IC, Quad 2-Input AND	74S08	123050	1		" " 301206
29	IC, Voltage Reg.	78M05	125005-005	1		" " 301320
				-008	1	" " 301206
30	IC, Op-Amp. Precision	LM308	125009	3		" " 301457
31	Transistor, NPN	2N222A	101052	5		" " 301483

MASTER SPARES LIST						
MATERIAL LIST			PART NUMBER		REV.	
PERKIN-ELMER Memory Products Division						
TITLE	SUPER SERIES	MODEL	SF & ST	DATE	9	OF
ITEM NO.	DESCRIPTION	PART NO.	REOD	MIN. REV.	ACT. REV.	REMARKS
						NEXT ASSEMBLY/USED ON
	ELECTRONIC COMPONENTS (cont.)					
31	Transistor, NPN	2N222A	101052	1		Used on 301650
						" " 301653
						" " 301206
32	Transistor, PNP	2N2907A	101053	3		" " 301483
						" " 301653
33	Transistor, NPN		151003	3		" " 301653
						" " 301483
34	Transistor, PNP		151004	1		" " 301483
						" " 301653
35	Diode-Rect. .200V.	1N4003	100127	1		" " 301354
						" " 301206
36	Diode, Signal	1N5317	101034	36		" " 301206
						" " 301632
37	Diode, Zener. 6.8V.	1N5235B	101058-010	1		" " 301483
				10V.	1N5240B	.015 1
						" " 301483
						" " 301206
				5.1V.	1N5231B	.006 1
						" " 301483
						" " 301320
				4.7V.	1N5230B	.005 2
						" " 301632
						" " 301653
						" " 301206
38	Inductor, 5%		220uh	122500-001	1	" " 301206

MASTER SPARES LIST						
MATERIAL LIST			PART NUMBER		REV.	
PERKIN ELMER Memory Products Division						
TITLE	SUPER SERIES	MODEL	SF & ST	DATE	10	OF
ITEM NO.	DESCRIPTION	PART NO.	REOD	MIN. REV.	ACT. REV.	REMARKS
						NEXT ASSEMBLY/USED ON
	ELECTRONIC COMPONENTS (cont.)					
39	Inductor, 5%	1.5uh	101074-010	1		Used on 301206
			101074-270	2		" " 301206
40	Resistor, Variable	10K	100163-103	2		" " 301483
			503	1		" " 301632
41	Resistor, Variable	10K	138000-103	2		" " 301483
			202	2		" " 301206
42	IC, Quad 2-Input NAND	74S00	123028	1		" " 301320
43	IC, Hex Inverter	74LS04	123030	1		" " 301206
				1		" " 301687
				1		" " 301174